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MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

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No. 1

And Now—Let's Go to Work!



First half of 1920

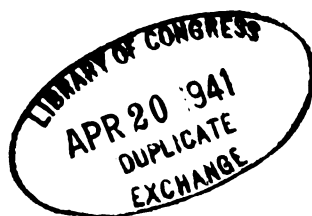


Second half of 1920



It's Time to SELL

**Dealers Who Are Going to Make Money
in 1921 Will Take Off Their Coats and
Roll Up Their Sleeves and Smile—
AND WORK**



The New Year Opens with Indications That the "Buyers' Strike" Is Weakening—Every Business Man Should Put into Practice His Knowledge That SELLING Is Going to Be an Important Factor in Restoring Buying, Which Means Restoring Business

THE automotive industry has entered the new year with its coat off and its sleeves rolled up—and a smile on its face.

A countrywide survey of dealer state of mind has raised the curtain on an inspiring exhibition of business courage, the kind of courage that appraises obstacles at their full value and then works out means of overcoming them.

In about half the important automotive distribution centers dealers have started out in 1921 with sales considerably more active than they were in the final quarter of 1920. In the other half there is virtually no improvement in business. *But in all centers dealers are AT WORK on plans to bring business back to normal.* AND IN ALL CENTERS DEALERS ARE CONFIDENT THAT THEY CAN MAKE MONEY IN 1921.

THERE seems to be almost everywhere a feeling like that expressed by J. N. Gunn, president of the United States Tire Co., who told New York dealers that in 1921 there would be built a new automotive industry with greater business ability and greater usefulness to the country at large. Gunn did not minimize the seriousness of the present readjustment period, but he saw in the conditions now prevailing the groundwork for an era of the greatest prosperity the automobile business and the country generally ever had.

Reports to Motor World from various states show dealers doing what all dealers will find it necessary to do to remain profitably in business—*putting their businesses on a business basis.* The dealer who never merchandised anything until he began selling cars, perhaps a year or two ago when cars were easy to sell, to-day needs to go to his banker, to his neighbor or friend who has been successful in some other line of merchandising, possibly to an expert accountant or business engineer, to get help on the reorganization of his business along selling, service, financing and accounting lines.

The methods of yesterday, which in some cases hardly deserved the name, will not do to-morrow. In some businesses where lack of right methods is a permanent obstacle to full success, or even to survival in extreme cases, it is doubtful if any investment would prove as valuable right now as an expenditure, however small, to introduce business science. Every dealer knows that he must have an aggressive selling and service policy if he is going to do his part toward hastening the return of buying and getting his share of the profits thereof, but back of selling and service there must be ability to borrow money when it is needed, which in turn rests upon an ability to convince the

lender that a loan is justified. In a word, the dealer who keeps his accounts under his hat is doomed to pass out of the picture unless he reforms. A background of stable business, scientific accounting, has become an absolute essential.

THE dealer confidence which has been described as a notable exhibition of business courage is based on the knowledge of the men exhibiting it that their houses are in order and also on the sure signs of business revival, which will be gradual, but no less certain. Dealers are pinning their faith on the shows to start things and early indications are that they are not going wrong. In the cotton belt the New Orleans show late last month brought a temporary revival of buying, but it appears to have subsided. But conditions in the New Orleans territory are especially difficult, with cotton, rice, sugar and sea foods, the principal means of revenue, bringing such low prices that very little business is being done in them, thus affecting all businesses. On the other hand, Los Angeles, which had a show early in December, has been buying cars, and some trucks, in more than fair volume ever since. And some other early shows have had a similar aftermath.

Few dealers anywhere expect to sell a great many cars at the shows and few expect the shows to put business back on a normal basis. *But the shows are going to help. And they are going to help at an opportune time, when the public has turned back the page that tells the hectic story of 1920, and when there is proof that the farmer, who must lead any return of buying in this agricultural country of ours, is beginning to buy.*

It may seem far fetched to argue that the prosperity of the New England automobile dealer is measured by the

prosperity of the Middle Western wheat grower but it is true. The Middle Western wheat farmer buys shoes made by the New England manufacturer—and if he doesn't buy them the New England manufacturer won't buy a car or truck. And so it goes the country over. The farmer has not been buying because he rebelled against a condition which sent his crop prices down in a steep curve while prices of the commodities he has to buy stayed up or declined slowly. But now these commodity prices are dropping more rapidly, and the farmer is becoming less hopeful of getting the crop prices he had fixed in his mind—and the farmer is beginning to buy.

From Kansas City, financial center of a great grain country, comes word that farmers are beginning to sell for \$3,000 and \$4,000 the crops they were holding for \$10,000 and are beginning to buy, which is releasing bank funds for industrial and commercial enterprises and putting new vigor into money circulation. And from other agricultural sections there is news of a similar start, in a greater or lesser degree, of the return to normal.

THE New York Show, recognized premiere of the automobile shows of 1921, opens this week. New York dealers expect it to help in a reasonable measure in reviving sales and in a large measure in laying the foundations for brisk business later on. Each of these dealers is spending \$250 of his own money to help the National Automobile Chamber of Commerce advertise the show. And each is working as he never worked before on plans to use his

exhibit as an agency of selling and a gateway to future sales.

In Buffalo, with the show almost two months distant, the dealers have resorted to co-operative advertising of the automobile, full-page advertising paid for with hard cash.

And in other cities there are campaigns of like nature under way or in contemplation.

This is the sort of faith, the sort of business courage that is going to help restore buying—in the automobile business and in all business.

No thoughtful dealer expects the shows or any sort of advertising to put business immediately back where it was a few months ago. The increase-in-buying curve is going to climb slowly, perhaps for several months, when the experts in business forecasting anticipate a satisfactorily steep and steady rise. At the same time every thoughtful dealer realizes that **SELLING IS GOING TO BE AN IMPORTANT FACTOR IN RESTORING BUYING—and he is getting set to do his part for his own good and the good of all business.**

IT'S TIME TO SELL. YOU ARE PART OF A SELLING BUSINESS. IT'S TIME TO TAKE OFF YOUR COAT AND ROLL UP YOUR SLEEVES AND SMILE—AND WORK.

Business is coming back. The automobile business is going to help it come back, is coming back with it. And for every automobile business man who takes an active part in this great, patriotic task there is bound to be—**PROSPERITY:**

How the New Year Opened in the Country's Automotive Distribution Centers

Business is far from dead but it needs some stimulation—more proof that IT'S TIME TO SELL

AS the Old Year closed Motor World canvassed by telegraph automotive selling conditions in the various centers of the country and learned that while business is marking time in about half the big automobile cities there is a decided improvement in conditions in the other half.

Below is a summary of the reports which every dealer ought to read:

Sales Slow, Prospects Good in New York

Automobile sales were practically at a standstill in New York as the year closed. In some lines the month had been fairly good up until Christmas, when business dropped off as it always does just before the show—and perhaps a little more so. One or two big factory branches report almost no sales, wholesale or retail, in the final week of the year.

Dealers, however, are showing no signs of lack of courage and are going ahead with extensive advertising plans in connection with the show. Opinion is unanimous that the show will start business, which will show a steady gain until spring. Several distributors declare a shortage of cars in the spring is inevitable unless the public shows an unexpected willingness to accept some of the used cars now glutting the market. In fact, the abundance of used car offerings is an obstacle to new car sales right now, as most of the dealers are declining to do much trading, and a large

majority of new car prospects are standing firm against purchases with their old cars left out of the transaction.

Business in light trucks is better than it was, which is accepted as a healthy sign of returning business in all lines. Heavy duty trucks are selling very slowly.

Chicago Selling Little, Looks for Show Stimulus

No notable increase of sales of automobiles is evident in connection with the holiday purchasing of commodities, and dealers are not in an expectant mood for immediate improvement. The reported increase in price of Franklin cars is expected to stimulate buying, which has been in a state of quiet for months through the effect it will create on the public mind that other cars may likewise have their price values moved upward. It can be said that show week is looked forward to with keen anticipation by all dealers as the real beginning for the return to normal in the automobile trade in this city. With that in mind, every effort is being made to line up prospects now and have them ready when the Coliseum opens.

Small Quantity Selling Active in Boston

Sales conditions in Boston have improved. The dealers have looked the facts in the face and decided to get down to earth and try what real salesmanship can do. They are selling cars again, not in big quantities, but enough to justify the fact that they are doing some business. Dealers have held conferences with their salesmen and mapped out campaigns instead of waiting for customers. Salesmen now are calling upon people and talking motor cars like the men who sell insurance, mortgages and other things that are not peddled out over a counter, with the result that those who tackled the job first are getting somewhat ahead of those who lagged behind. Some of the dealers have been going along doing a very fair business, others pretty fair and more of them very little. There has been a picking up in used cars and trucks, also, and it begins to look now as if the new year would see sales slowly increase, and with the show impetus and spring approaching conditions will be better. While there are a lot of cars stored here now, it would seem as if they would be sold in about a month after the March show,

leaving a chance for new factory orders. It certainly is not as bad as it was a few weeks ago.

Sales Trend Upward in Philadelphia

The actual selling conditions here show a slight upper tendency in the new passenger cars and somewhat more decided impetus in used cars. The truck sales are dull and accessories are not moving to any appreciable extent. This division of the industry appears to be the worst off unless it is the tire trade. It cannot be said, however, that there is any recessionary movement here as regards the automotive industries. Summing it all up, there is only a little improvement altogether, but this is sufficient with the promises held out of more than usual interest in the show, Jan. 15 to 22, to cause optimism in the trade not only for the next three months but thereafter.

Wholesale and Retail Improving in Kansas City

The wholesale distributors of passenger cars are receiving improved calls for cars and report that business is already picking up and gives promise of more expansion shortly. The retail sales in Kansas City have steadily increased during the past few weeks and would be much larger if dealers were willing to make more trades. Nearly every dealer has had more inquiries, and a greater number of drop-ins by people who had not been directly solicited. One dealer in a moderate priced car said he would have a retail trade above normal if he would take in more used cars. Another dealer in moderate priced cars has had a fair business in new cars, selling a number normal for this season, and a really good business in used cars. Several sales a week were made by some dealers in higher priced cars, no trades, the day before Christmas.

Dallas in Oil Country Knows No Depression

There has been no business depression so far as the automobile dealers of Dallas and territory are concerned, nor do indications point to any slack selling period. People are buying more automobiles than ever before, dealers declare. A new idea was developed in Dallas and other Texas cities during the holidays, and that was, "Buy a car for Christmas," and many of them went as Christmas gifts. Since the recent reduction in prices was made the dealers have enjoyed the best business of years. From the inquiries dealers are having concerning new models or new cars generally, it would appear the retail automobile business in the Dallas territory and in other sections of the State is well assured for the coming year.

Austin Territory Suffers From Farm Depression

The automobile dealers in the Austin territory as well as throughout the cotton growing region of Texas are feeling the depressing effects of the slump of cotton prices and the consequent effect upon general business. The farmers are placing orders for very few cars, which is a condition that the trade has not felt for several years. Merchants and other business interests, which are dependent to a more or less degree upon the prosperity of the farmer, are likewise holding off in buying cars. The business situation is the most acute it has been for several years. No early improvement is looked for. On the contrary, the crisis has not yet been reached, according to the views of bankers. It is stated by retail dealers that deliveries they are now making are of cars ordered some time ago. There continues to be considerable buying of cars, but chiefly of the lower priced type which are essential to certain lines of business. Most of the orders come from professional and business men who have not yet felt directly the effects of the big drop in cotton prices. Little hope is held out that trade conditions will improve during the next three months unless there should be a material increase in the price of farm and range products, which is regarded as unlikely. It is estimated that of the 4,200,000 bale cotton crop which Texas produced this year, more than 2,000,000 bales are still in the hands of the farmers.

Milwaukee Spring Delivery Orders 10 Per Cent Ahead of 1919

State representatives of automobile companies here are showing increasing orders for spring delivery, about 10 per cent above those of a year ago. Local dealers are wrestling with problems of how to dispose of used passenger cars and have thus far been obliged to decline many tempting trades involving new sales. However, they state business is always slow at this time, especially on open used cars. Several dealers are planning special advertising and selling campaigns in January or February after the income tax period, and are depending on sales for spring delivery on liberal deposit. It is expected these plans will develop formidably through intensive salesmanship. At several private conferences the dealers expressed decidedly more confidence in the next three months. They do not expect a boom period but do expect a response exactly in proportion to hard sales work. They declare that practically all owners who trade in annually and bi-annually for new cars are anxious to get action as soon as possible, showing there is plenty of money among the regular owners. Low priced cars are not expecting anything like the rush of two or three years ago, of course, but they feel sure they have a sound and healthy busi-

ness which will more than make up for the reduction in boom volume.

Poor Prospects in Minneapolis Region

Summarizing the Northwest territory as a whole, automobile business is practically at a standstill. Although locally in large centers there is an improvement in sales, the outlook for the next three months is not bright. The trouble seems to be that the farmer is paying for clothes and food at the same price he paid six months ago, but crop prices are lower, and he is, therefore, holding his products.

The disposition of both the retailer and buyer seems to be favorable toward the purchase of cars but the bankers probably will not be able under the present financial conditions to help the deals through. The opinion seems to be that if 30 per cent of the delivery of cars a year ago is made, dealers will be doing well. The sudden arrival of winter has reduced the late driving appreciably, which will have unfavorable reflex action on sales.

Cleveland Trade Improved in Last 30 Days

The retail automobile trade in Cleveland reached its lowest point approximately 30 days ago, and the dealers assert there has been a gradual improvement since the early part of December. The trade is much better now than it was in November, and the Christmas shoppers helped. Some retail business is better in Cleveland than in the district outside of the city. There has not been a sharp rise in the volume of buying from retailers here, but a slow and moderate growth with enough inquiries to lead dealers to believe that there will not be a backward tendency. The dealers are giving their attention to their exhibits for the show and will put more effort into this work on the floor of the show auditorium than they did a year ago. They expect better business to follow the show, and the average dealer views with optimism prospects for the next three months and expects the revival to continue well into the summer.

Cincinnati Expects Pick-up in February

Dealers in the Cincinnati territory are optimistic over the prospects for the future and are confident that business will begin to pick up early this year. This increase is expected to materialize about Feb. 1. From that date on sales are expected to mount so that the trend will be well defined before the end of March. At present there is some activity here, but not much.

None of the dealers are figuring on anything like a big business for the regular 1921 season. They realize that the market is or will be glutted with used cars, purchased during last year's

scramble, and that prospects for new cars will necessarily be limited.

Des Moines Looks for Revival in March

The automobile conditions are practically stationary in Des Moines territory. One distributor had twelve salesmen in the field during the entire month of December and they failed to bring in a single order for immediate delivery. The prospects for spring business are good, but little business is expected during the next sixty days. To show the trend during the past sixty days, of 1000 registrations issued in 25 counties in Des Moines territory, more than 800 were for Fords. Relief from present conditions is dependent upon the credit situation. In the farm produce market there are signs that the movement of grain has started and this will tend to improve the situation, but it will be slow.

Evidence of Renewed Buying in Buffalo

The outlook for the automobile business in Buffalo and the surrounding territory during the next three months is decidedly encouraging, according to Buffalo's foremost distributors who declare that the number of live prospects is gratifyingly large, that interest of potential buyers is much keener than it was and that an increasingly large number of inquiries are coming in. A consensus of opinion of several of the city's larger dealers is that if all the persons who are saying that they are going to buy cars do buy them, there will not be enough to go around when the winter wanes.

Conditions Normal in Southern California

Automobile selling conditions in Southern California are normal. Both passenger cars and trucks are accumulating and being warehoused, but this has been the history of the industry at this season for years. When dealers in other sections of the country stop deliveries, factories always seek an outlet here due to climatic reasons, and usually make an extra inducement to dealers to stock

heavily, and unless changes in models are likely the dealers usually comply, so there should be no alarm felt over heavy stocks now on hand. The Los Angeles bank clearings for 1920 will reach \$4,000,000,000, against that of \$1,500,000,000 in 1919. The banks here have rediscounted less paper than those in any city of similar size in the country. According to reports, prospects for automobile business are to be regarded as

In 1921, if all the prospects develop, dealers say the demand will exceed the supply. The next two or three months will witness only the beginning of return to normal conditions, which dealers do not believe will fully materialize before late spring or summer. Very few sales are now being made, but it is certain the trend will not be backward for money is becoming less tight and dealers say this will mean slow but gradual increase in sales from now on. All business lines are doing everything possible to restore public confidence.

The Dealer Who Can Make Up a Statement Like This Knows Where He Stands, He Can Tell His Banker and He Can Borrow Money

BLANK AUTOMOBILE CO.		CONTROLLED BALANCE SHEET	
ASSETS		LIABILITIES	
CURRENT ASSETS		CURRENT LIABILITIES	
Cash	72 349 62	Accounts Payable	65 430 92
Accts. Rec., -Service	16 721 43	Customers Deposits	60 793 85
Notes Receivable	175 284 98	Accrued Liabilities	5 897 42
Inventories		Total Current Liabilities	132 330 20
New Cars	126 743 21	Reserve for Depreciation	7 875 62
Used Cars	42 789 33	" " Taxes 1920	32 543 82
Parts	75 584 76	" " " 1921	40 000 00
Acc. & Supplies	25 341 89	Capital	100 000 00
Securities		Surplus	319 055 63
Liberty Bonds	30 000 00		
Chamber of Commerce	100 00		
Total Current Assets	571 754 92		
Fixed Assets			
Machinery & Equipment	17 664 00		
Furniture & Fixtures	15 639 00		
Service Trucks	4 500 00		
Demonstrators	12 346 00		
Deferred Charges			
Coal	1 250 00		
Prepaid Insurance	5 240 00		
" Expense	587 35		
Stationery & Printing	2 854 00		
Total Deferred Charges	9 931 35		
Total Assets	631 825 27	Total Liabilities	631 825 27

A stable, going mercantile concern should be able to borrow \$200,000 on a statement like the above. The difference between A—total assets, \$631,825.27—and B—\$172,789.64, total of the items indicated by the three arrows, or the total of liabilities considered in making the loan—is \$459,035.63. A \$200,000 loan would be less than half the balance of as-

sets over liabilities, a ratio usually considered a good loan risk. If your assets are \$631,000 and you can present a balance sheet like this you ought to be able to borrow \$200,000. If your assets are half as great and liabilities correspondingly low you ought to be able to borrow \$100,000, and so on down the line.

The ratio is not arbitrary, of course, but is a good example of a basis for conservative lending. But assets alone won't get a loan. Without an accounting system that will enable you to make up a balance sheet that means something you may be unable to borrow—or at least to borrow as much as you need.

This financial statement and accompanying explanation, which was first printed in the Winter Business Number of Motor World last October, was approved by a big city dealer who has had a wide experience in dealing with banks. A dealer who is unable to make up as intelligent a statement of his own financial condition should consult an accountant and put his business on a business basis

favorable. December may show a slight falling off in sales, more so than in November, but not in an alarming way. Indications for the next three months show that sales will prove as good as in previous years, January and February usually being light months. November saw more sales than October, and only 23 less than September and 19 less than August. The dealers could stimulate the new car business remarkably by loosening up on trade-in allowances, but the used car market is glutted and sales are very poor.

Atlanta Sales Slow But Prospects Are Good

Dealers express confidence that business will pick up considerably early in 1921, but the consensus of opinion is there will be no return to normal conditions for several months unless cotton should climb to a price that is double the present quotation. The holiday business was fairly good.

ers profess to believe that after the end of January, when the farmers know more definitely what they are going to get for their crops, business will be better.

Buying for Spring Delivery in Oregon

The new year means more to automobile dealers here than a few good resolutions. They expect it to mark the turning of a new leaf in business conditions that will affect all lines, the selling of automobiles included. Not that any sudden wave of buying is looked for the instant 1921 arrives. It won't be so pronounced, but the dealers believe it will mark the definite opening of a new era of better times. Probably the orders will not be numerous before mid-February or early March, but almost without exception, they expect conditions to be on the upgrade from now on. This will be in line with normal

(Continued on page 44)

New Orleans Hit by Farm Conditions

The retail automobile conditions here are almost at a standstill and the upward impetus given by the pre-Christmas show seems to have died out within the week after the show closed. The majority of the dealers admit they have more cars either in warehouses or in depots than they can sell. Dealers in cars whose makers reduced prices report that there is some movement in Louisiana, Mississippi and east Texas, but in the city conditions are dull. This dullness is largely due to small receipts for sugar, rice and cotton crops, but dealers

Is the Jobber Cutting a Swath or Just Filling a Niche?

A Manufacturer's Letter Says:

- 1—*If the manufacturer has to create the demand there is no reason why he should not have all the profits.*
- 2—*If the manufacturer does all the creating, all the investing and takes all the risk of a falling market, why should he waste time with jobbers whose first thought is of price guarantees?*
- 3—*Jobbers have got to put their shoulders to the wheel and give the manufacturers some business. They have made money. . . . They must see that the manufacturers keep their plants going.*

THERE is something for automotive equipment jobbers to think about in a letter which a manufacturer wrote the other day to Motor World. In brief the manufacturer asked: Why jobbers in the automotive equipment field?

The manufacturer wrote the letter after he had turned over in his mind the experiences of his representatives at the business exhibit of the Automotive Equipment Association in Chicago, at the show of the Hardware Men's Automobile Accessories Branch in St. Louis and at the equipment exhibit held in Cincinnati in connection with the annual meeting of the Ohio Automotive Trades Association. As the trade knows, the Chicago exhibit was not a buying show, though the manufacturers booked some orders. The St. Louis show was worse—the manufacturer who wrote the letter did only \$400 worth of business. Then the Cincinnati exhibit came along and was attended by dealers. *They bought.* Some manufacturers who exhibited there in co-operation with their jobbers did more actual business than at Chicago or St. Louis. And this business set them thinking—because *it was dealers who did the buying at Cincinnati and it was jobbers who didn't buy at Chicago and St. Louis.*

AT any rate, the manufacturer who wrote to Motor World feels pretty strongly that the jobber ought to be out on the firing line inducing dealers and garagemen to buy. He feels that the jobber ought to share in a degree at least with the manufacturer the risk of carrying stock. He feels that the jobber ought to be more active in *creating demand* as against merely supplying it.

This manufacturer doesn't pretend perfection and he may not be right in everything he says—but *he says something.* And he says a good many manufacturers agree with him—which means something to the future of the automotive equipment industry and to the jobbers in it.

What the manufacturer says is worth reading—and thinking about:

MAY I be pardoned for wondering, sometimes, whether the time is far off when the jobbers in our industry are going to be eliminated entirely?

I note that one of the largest oil concerns has recently discontinued its policy of selling through the jobber. I also note that one of the largest canned goods houses is doing its business exclusively direct with the dealer to-day. I have spoken to a number of other canned goods men and they have missionary men out continually to the dealer. I wonder if the jobber realizes just what this means.

The manufacturers are getting tired of this: "create the demand, and we will supply the demand" stuff. *If the manufacturer has to create the demand, there isn't any reason on earth why the manufacturer should not garner all the profits.* Here is what we are doing for most of the jobbers:

1—Advertising our merchandise very extensively so that the jobbers have practically no trouble in educating their trade to the fact that there is such an item, what its uses are, where it is applied and how easily it sells.

2—Sending out missionary men, creating the demand, giving the jobber a profit which is entirely out of proportion to what the jobber should get, the expenses of carrying on business in the automotive accessory line being much more than any other similar line of merchandise.

3—Equipping our plants so as to supply this material promptly, as soon as the jobber's orders get there. We are supposed to have sufficient machinery on hand to keep up with all demands. We are supposed to speculate in raw material to keep abreast of all the requirements of the jobber. We are supposed to take all the risk and let him have all the profit.

PRICES went up last year. Every manufacturer who took orders at a fixed price delivered the merchandise, irrespective of where the price had gone to, at the prices at which the merchandise was sold. The only orders that were cancelled were those cancelled by the jobber. The only position that I heard of a manufacturer taking regarding these orders, which the jobber might object to, was that the jobber had to take the merchandise when it was ordered; that he could not put off the delivery of the merchandise sold at the low price, so as to get the benefit of the manufacturer's speculation for five years instead of only one year. Of course the manufacturer was right. Some of the jobbers thought the manufacturer was manifestly unfair to insist that he take the merchandise in 1920, and could not run over some of this stuff until 1921.

Now prices are liable to come down. They are not coming down much because they didn't go up much. The manufacturer is supposed to guarantee that if material is sold for any less money while the jobber still has some of this material in stock, the jobber won't lose the money. The poor, dear manufacturer did everything he possibly could to develop business for the jobber, to see that the jobber was supplied with stock, because the jobber as a business man

could not afford to speculate—only the manufacturer could speculate; and now they want the manufacturer to take the entire loss. *How much longer does the jobber imagine the manufacturer is going to stand for this kind of nonsense?*

The manufacturer takes all the risk, does all the creating, does most of the investing. The jobbers get most of the benefit, and when it comes to asking the jobber to take 25 per cent of the risk, the manufacturer being willing to take 75 per cent and the manufacturer asks for business to keep his factories open, the jobber has the nerve to get up at the convention, as you heard them, and say, "Guarantee your prices, and we will give you the business." I tell you I have spoken to hundreds of manufacturers. They are sick of it. They are sick of it for the following reasons:

CONCERNS which were a year ago 100 per cent solvent, which during the year 1920—in spite of the depression of the last few months—have made real money, are to-day in a position that, unless something happens to help them keep their plants running, they are going to go broke. Now you will say, "How can a solvent plant go broke?" Merely from the lack of money to operate. I owe you some money. You insist on the money. I haven't the money to pay you. You get a judgment against me and try to collect the judgment. And what does our good friend the sheriff do? He closes me up, sells out my plant which is worth \$100,000—as in a recent case in Chicago—\$100,000 for machinery alone, all the raw material and everything else in the plant, for \$22,000. What do the creditors get? Maybe 30 cents on the dollar. What do I get? Why, I am lucky if I can get a job somewhere!

Jobbers have got to put their shoulders to the wheel, and they have got to give the manufacturer some business. They have made money; the manufacturer is willing to give them a little dating, but the jobber must see that the manufacturer keeps his plant going.

A TRUCK SALE

That Promises to Help Sell
Truck Transportation to Farmers

THE Sherman Auto Co., Greeley, Col., distributor of Bessemer trucks, brought about a fleet installation a few months ago that is full of significance. It sold to the Consolidated School District of Ault, Colorado, eight Bessemer trucks, 1½ ton chassis on which bus bodies were built; and, more important even than the sale, it assisted in the building, equipping and manning of a garage on the school grounds.

This consolidated district was established a year ago, serving with the new school building in Ault, a community of 12¼ miles radius from the little city of 2,000 people. During the first year no provision was made for transporting the children. The necessity for transportation was evident, and the purchase of the buses resulted. The most convenient method of garaging seemed to be in the board's own shop, and a building was

erected for this purpose, equipped with steam heat, on the school property. The Sherman company co-operated in the plans for the garage; helped in the selection of the man to operate the garage, and trained him in Bessemer truck work. The eight vehicles are operated by eight of the men teachers in the school. They live in Ault. They take the buses out each morning after the children, returning the children home in the afternoon, and bringing the buses back to the garage by 5 o'clock. The vehicles are inspected, oiled and greased each evening. The Sherman company trained the teachers in the driving of the trucks.

The sale of eight trucks to a school district is significant enough in itself of the future field for truck sales in Colorado. Still greater importance, however, attaches to the effect which the efficient, regular operation of these trucks will

have toward stimulating use of trucks by farmers.

The influence of the almost daily passing of the buses on the roads, stopping at farmhouses for children, is certain to stimulate interest in and appreciation of truck service. Every farmer who has a child in school will note the continuous demonstration of truck use. And the demonstration varies from the usual advantage to the dealer in the use of his truck in the community, in this respect—that the dealer has his hand constantly on the one factor in the servicing of eight trucks. The eight trucks must all go every school day; they must all be inspected every evening, at the same place by the same man.

Of all "key positions" which a truck dealer might covet, consolidated school districts would seem to be among the very important fields.

When Your USED CARS Are— And Your SELLING METHOD Is— Your SALES RECORD Will Be—O. K.

Read How Smith Did It

“**Y**OU have got to sell used cars to sell new cars. We will not take in used cars in the sale of new cars—and that means close to 100 per cent of new-car sales—unless you have disposed of a used car, one for one.

“What sells used cars and brings the proper price is when you have no excuses or alibis to offer for them, either in the car itself or the name of the house.

“Not one used car goes on the floor for sale until it has my personal O.K., and when that O.K. goes on a car, it means that it is absolutely right, ‘all correct’ or anyway you want to translate the cryptic initials.”

JESSE A. SMITH, president of the Jesse A. Smith Auto Co., 700 Grand avenue, Milwaukee, and W. Harry Cahill, his retail sales manager, started a drive recently that sold twenty cars for a total of \$23,000 in eight days when the market was supposed to be dead, with a couple of short speeches, the gist of which has been given in the foregoing.

They talked to the salesmen, and not at them. Vigorous and pointed though their talks were, they were 100 per cent man-to-man, calm and forceful. But the cards were put on the table, face up.

The entire sales force of the company was in on this event. No distinctions were drawn between used and new cars. Both were involved in the major problem, *selling cars*, so intimately that the two were merged. In fact, as Cahill says, “they merged themselves when Old Man Psychology hit the ball a few months ago, right at the beginning of the late fall season.”

The House of Smith carries the brand of the Hudson and the Essex. Its used car department, of course, showed a variety; naturally, lower priced cars than the Hudson or the Essex, as a rule.

It is unnecessary to go into the conditions and circumstances that led up to the planning and opening of the sale. What they accomplished at Smith's has been told. To repeat: twenty cars, total amount of sales \$23,000. How it was done, is the real story. Smith told the Motor World man to “talk to Cahill, he's the doctor.”

It has always been the policy of

Jesse A. Smith to put a man on a job and then let him run it. “It's some stimulant,” said Cahill, “and goes

When the Sales Force Is SOLD on Selling

ACAR'S a car and a sale's a sale and “used” and “new” only describe.

This story tells how Jesse A. Smith, of Milwaukee, merged his used and new car departments into one big selling machine by centering attention on the fact that **SELLING** was the big object of the business.

It tells about the result: Twenty cars for a total of \$23,000 sold in eight days when the market was supposed to be dead.

“O. K.” says Smith—**READ IT.**

down smoothly. Great stuff. You don't bump your elbows while you're working, with such a policy.”

THE Smith plant has its own paintshop. A painstaking Norwegian, who is simply pernickity about perfection and completeness of detail, is in charge—he, also, is lord and master of his domain. He knows his big job is to do the key work in accomplishing the Smith used car policy, and you just try to get a job pushed ahead of something that is down for immediate attention! It can't be done.

There is a special repair department for used cars, on another floor, quite a piece away from the service shop. Used cars consequently do not lag behind in the work of the institution.

Now you have a picture of the general layout and policy. Next comes the ad-

vertising. It is best told by the reproductions herewith, and note especially the reproduction of the sign, “O. K., Jesse A. Smith,” with that strong ending stroke of the signature.

In addition to the O. K. kind of repair and paint work, overhauling and rebuilding, winter tops were put on the used cars that didn't have them.

Now, this means real winter tops, not winter curtains or other devices. “It is less difficult to get the added price of a real winter top than it is to get the added price of curtains,” said Mr. Cahill. “All right,” said Smith.

“Enclosed Car Luxuries at Open Car Prices,” then, was the slogan of the campaign. There was a little “fire-works” in the advertising and sales work, also.

“But three more days,” “But two more days,” and so on. The sale was stopped on the hour, and more than one late customer found out the firm meant what they said. The price had gone up from \$40 to \$90 per car, and it stayed up. The result? Six more cars in the next two days, “**SOLD.**”

The salesmen were drilled and schooled with special sales arguments for outside as well as inside use, and these arguments were identical with those used in the strong newspaper campaign run at the same time. Here are some examples:

“Our Policy—Selling to any customer only such a car as he may feel he wants and needs; selling only cars that have been thoroughly overhauled, inside and out—made like new in every *essential* quality; selling cars at the right price and on terms agreeable to the purchaser—we finance our own term sales; every sale under a positive guarantee that the car is as represented.”

“Ninety per cent of the used car buyers cannot judge the quality of the cars,” said Mr. Cahill. “Therefore Smith's personal O. K. They know Smith, even

if they don't know the insides of the cars."

The advertising man took that down and ran it in one of the ads, and it got a lot of favorable comment.

Another one the advertising manager tumbled on in a meeting, and used, was a statement by the service foreman: "Shoot, you put all my best mechanics in the used car department as soon as they get to know anything about the work."

As to prices, the public announcements and the frank statements of the salesmen to the public, were about as follows: "Recently we made a number of deliveries on advance orders for enclosed cars on which we took cars in exchange. These, with the cars already on hand make more than we can profitably carry through the winter season. This is especially true as we finance our own sales, and our storage space is limited. Therefore we consider it good business to dispose of these cars quickly."

The used cars got the main floor of the big Smith building. One new car, only, remained. There was a reason. One day the advertising man played this up in big letters in the papers and on a large cloth sign at the building: "Pick out the one new car on the floor."

Every prospect in the card index was called on and told the story of the sale by the men.

One thing Smith will not tell is the proportion of new cars to that of used cars sold. He sold more used cars, however; but he says: "We have the greatest list of prospects for spring sales you ever saw. All new names, too. Nothing like combing the field, boys. Only, when you comb it, do a real job. We did, and watch us next spring."

Price tags were put on the cars. They gave the original price of the car, and the used-car sales price. The salesmen talked "actual savings."

Now, another little thing. Last summer Smith put out an Essex in white and red, with the arrow conspicuously, but neatly painted on the sides and the back. At that time people were invited to stop this car if they saw it, and have a ride free, wherever they might be going.

The car was "done anew" and put out again in connection with the special sale. It was a good tie-up to the campaign, a reminder of consequence. Few asked for rides, but many saw the car. The actual results of the stunt are not known, but it is believed to have helped along in the sum total of the work.

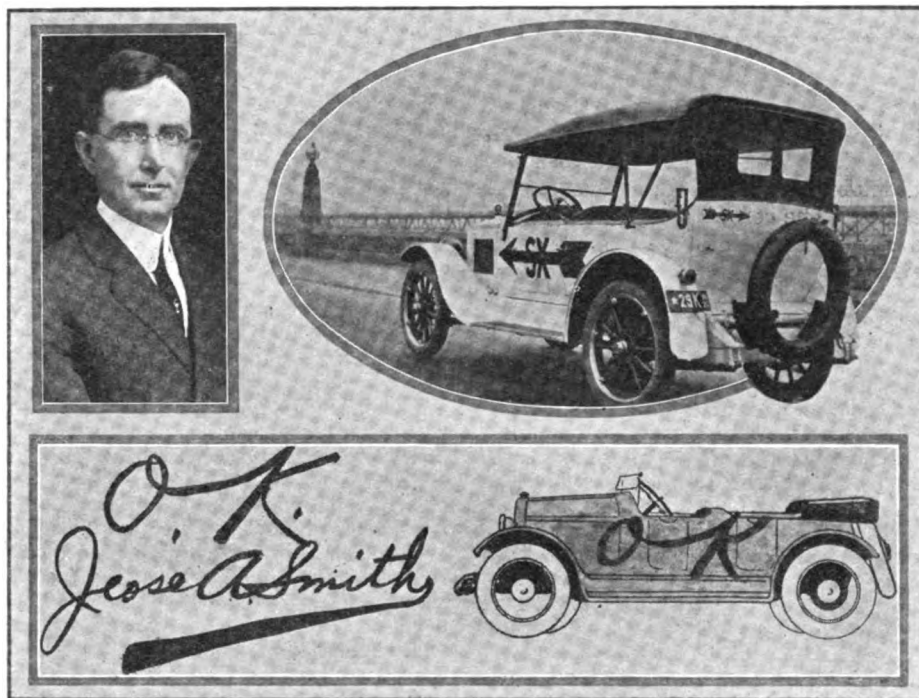
Essex and Hudson advertising ran during the special campaign—regular orthodox automobile advertising, with the Smith name largely displayed.

Some reflections by Cahill on selling in winter and spring: "Give a fellow a run for his money. It's a mistake to divide the sales forces between used and new cars. The division, to my mind, cuts off sales factors to which every salesman is entitled. It reduces the possibilities of outlets. The relation between used and new cars, on account of 'trade ins' is too close to be separated. The new car sales force should not be in a position to make a goat of the used-car de-

partment. Used cars must be right; the salesmen do a lot better if they have responsibility in taking in as well as in the selling of the used cars. Last February we listed twenty-six used cars and sold 23 in one week. We are going out again in February. Our big working point is

lessens confidence. Our men work on commissions entirely. We pay right on top of the sale. Under our policy of selling only rebuilt and renewed used cars, and the proposition we put up to the salesman, it is not the salesman's fault if a car comes back on us.

They're O. K., said Smith—So Folks Bought 'Em



Above is a picture of Jesse A. Smith, Milwaukee dealer, whose sales force sold \$23,000 worth of used cars recently in eight days, and his "O. K." advertising feature that inspired confidence and helped sell them

that we keep the cars for the purchaser till the driving season opens up, if they will buy in February and make a reasonable payment.

"Once we had a dandy Nation-1 taken on a sale. We made a special of it, and it was sold and paid for the entire expense of the sale. We never use cash prizes or offer free things with cars. It

"The used car market is my sales barometer always. If the used car market gets good, it means good new car business.

"Especially the small town dealer wants to look out for the fellow with a used car who is a better salesman than the dealer. It takes backbone to sell cars these days."

Used Car Dealer Plans Future Expansion

Attention Is Given During Slow Period to Perfecting Selling Organization

THE Peterson Corp., dealer in rebuilt and used cars in Los Angeles, refuses to be discouraged by the conditions which have arisen in the industry within the past few weeks and which have had more or less of a depressing effect on the used car market.

This firm welcomed the situation as an opportunity to plan for greater service in the future, and has made one of the strongest expressions of its confidence that any dealer could make—the erection of a brand new building which provides for extensive expansion.

The company has just moved into its

new home, a handsome three-story and basement building, containing 36,000 sq. ft. of floor space, and said to be the largest, exclusive used-car establishment west of Chicago, carrying every make of car from Ford to Locomobile.

With several new stores in contemplation for the immediate future, the corporation is now planning to erect a factory in Los Angeles within the next year. In this factory Peterson expects to realize his ambition to manufacture the Peterson car, which will be a sturdy, light, 4-cylinder car to sell at a popular price.

Does Your Service Say Call Again?

**This Connecticut Tire and Accessory Dealer Brings 'Em
Back by SELLING Service That Pleases the Patrons**

DIRECT by mail advertising is employed to good advantage by the Holcomb Auto Supply Co., Hartford, Conn. The firm also uses small copy in the automobile edition of an afternoon paper with satisfactory results. The company sells service. And the term service as herein used may be regarded under several classifications.

SOME time ago the officials of the company were taking stock of their situation in the trade. The big idea was to increase the volume of business with additional overhead. At two of the stations gasoline and oil are sold and there is a steady flow of trade from regular customers in addition to transient business which is sizable.

The various angles of car maintenance were considered and it was evident, after much careful consideration, that one thing which motorists neglected was the changing of the oil in the crankcase. The firm used small copy in the newspaper setting saying oil in the crankcase would be changed free of charge

Here was something that appealed to the owner who was averse to doing the trick himself. These small advertisements assisted greatly in getting the message to the car owners, but to make the thing even stronger and to be doubly sure that the message got across, circulars were printed in which the message was very clearly told. These circulars were mailed first class to a large list of car owners.

The Holcomb Auto Supply Co. is representative on sales and service for the Vesta battery. Not only does the firm send out circulars on passenger car equipment but also on trucks. This business is growing.

From time to time the company cir-

cularizes other branches of its service and in the light of experience is convinced that the stunt is one that pays and pays well.

The company has a sizable one story station in the heart of the city and the slogan adopted by way of exploitation of the place is 'In Doors, Out of the Weather, Off the Street.' And there's the milk in the cocoanut—off the street.

A car owner calls at the station possibly for nothing more than free air. He gets this with a welcome. Real good service is a salable commodity and as such will be purchased gladly by most people. Manager Corey approaches the man with a welcoming smile and engages him in conversation. The fellow may be a total stranger and if he is Corey learns something about him. Corey can be of real service and he is. The conversation would go something like this:

"When did you take the carbon out last?"

"Six months ago."

"That's too long, does the engine knock?"

"On the hills, sure."

"Better have it fixed."

"I know it, but can't lay up the car."

"Where are you going from here?"

"Over to the office."

"Leave the car here, we will burn out the carbon and run the car over to the office when the work is done. And, by the way, when did you change the crankcase oil last?"

"Oh, a couple of months ago."

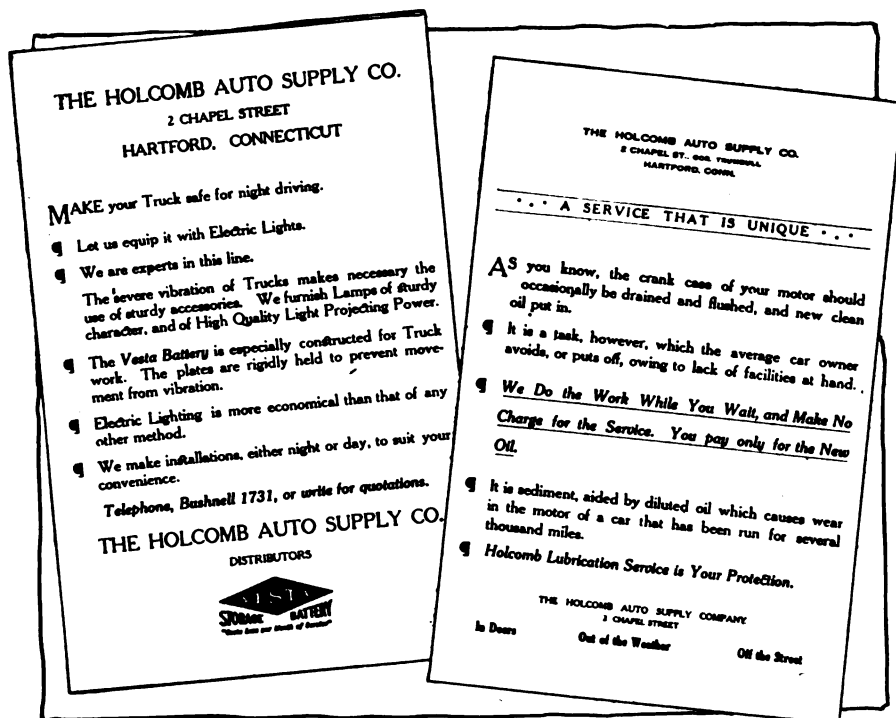
"Too long; we will clean out the case, put in fresh oil and charge you only for the new oil."

And the owner, glad to get rid of the job, says: "Go to it."

Corey has performed a service by reason of which the car runs better and the owner is very much pleased. And he being pleased tells some one else, and there you are. A sort of endless chain and the foundation of a nice business.

The Holcomb Auto Supply Co. at the Chapel Street station has burned the carbon from hundreds of cylinders in the past month for busy men, and has put clean oil in the crankcase of practically every car. It has been a paying service.

Unique Service Helps Builds Business



Service that is unique is increasing profits and building future business for the Holcomb Auto Supply Co., Hartford, Conn. Among the various services that this firm renders customers for tires and accessories are installation of special truck lighting equipment and crankcase oil replacement. Direct by mail advertising, similar to the specimens shown above is combined with small newspaper ads in promoting this service

Eventually— Why Not Now?

By RAY W. SHERMAN

"THAT'S all right, Reilly," contended Jim the Factory Sales Manager, "but it's going to take some time to work this thing out. You can't expect a whole industry to upset its method of operation in a few days and flop over to an entirely new system of doing business. Can you?"

Reilly, who distributed Sennetts in and about Calawassa, and who had the usual form of Reno factory contract, which could be abrogated for incompatibility, indigestion or shortage of private stock, hesitated a moment before replying. He and Jim had been arguing this contract matter for weeks. On the main points they were pretty much agreed—but still nothing seemed to happen. Reilly's hesitation was only momentary.

"Jim," he said, "why is it that this thing can't be done—and done NOW?"

"Why—well—because it can't. Or, at least, it would be hard to do it now. It's too revolutionary."

"Revolutionary nothing!" Reilly retorted. "This thing makes me think of Congress—and other law-making bodies."

"How so?"

"Well, you see, it's like this," Reilly explained. "It is merely a matter of historical record that legislative bodies always trail after the thought of the people, and most legislative bodies are very far behind. The parcel post and Federal Reserve are not new things. They were KNOWN to be good things for years before the legislative bodies made them law. Suffrage for women was accepted by a big majority of the people long before the legislators even began wrangling about it. The law-makers always are miles behind. It's funny—but they are."

"Hum-m-m, never thought of that," agreed Jim.

"And there are a few other things you never thought about," Reilly continued. "Why did you decide to make fifty per cent of the Sennett line sedans?"

"Because they'll sell. It's the coming car," Jim enthused.

"Certainly, it's the coming car. You took a look down the road of the future and saw that some day the big bulk of cars would be enclosed cars of some kind, so you decided not to be behind the parade. You began NOW to get just a bit of a jump on your competitors.



You saw the thing would come eventually so you went at it and pushed it a little. But wasn't that a rather revolutionary thing to do?"

"Not necessarily."

"Very well," Reilly answered. "Why did you take out a bigger bunch of life insurance four years ago?"

"Why—because I felt it my duty," was the proud reply.

"Sure! You knew you would—or ought to—do it some time, so you decided to have it over with. But wasn't it rather revolutionary for you to make such a big increase in your life insurance?"

"Oh, I don't know."

"Well I know," Reilly shot back. "You're dodging my questions. You know I'm right on every point, and you know exactly what I'm leading up to and you're afraid to say yes to a single question for fear I'll hold it as evidence against you. What I'm going to say is that the way to do a thing is to DO IT. If you're going to use somebody's flour eventually why not do it NOW? If you're going to take out extra life insurance, why not do it NOW? If you're going to hire a man to put efficiency into your sales or service or anything else, why not do it NOW? And if we're ever going to have some equity in these dealer contracts why not get at it NOW and put it there NOW? That's my point!"

"But it's revolutionary!" Jim replied.

"Oh bushwah!" Reilly contended. "The revolutionary aspect of this thing exists purely in the minds of yourself and a few other law-makers of the industry. Just because your grandfather—and mine—had a kerosene lamp hanging from the ceiling we still have hideous chandeliers to carry electric lights instead of having our homes fitted with concealed, comfortable and more healthful lights. We all hate to change. It's human nature—but the man who gets ahead is the one who ascertains what change should be made, gives himself a

kick in the face to arouse his dormant intelligence and does the thing NOW. Who are the most successful men in industry, those who establish precedent or those who follow? No answer is required.

"And now—if you'll just take a look into the future you'll admit that some day the factory-dealer contracts are going to be somewhat different from what they are to-day. They are going to be sound foundations for a big industry. The contract of the future will be between a GOOD dealer and a GOOD factory, and if either of the pair is no good the contract isn't any good any way.

"But the good dealer should have a contract that can't be cancelled over night. And the factory should exercise some supervision beforehand and less afterward and make sure it is getting a good dealer.

"If we're ever going to have a real business, on a sound bottom, all set for a long fast run, we've got to have stable relations between the parts of that industry. It isn't fair to a dealer to take his contract away from him after he has spent years and money building a business in some car. There are several details that need adjusting, and already a few manufacturers are paying close attention to the matter. Some have already instituted the system of giving five-year contracts to worth-while dealers. Others are thinking about it, and most of them probably think as you do, that it's too revolutionary.

"You agree with me, I know, Jim, that a revised contract is necessary for stability in the competitive period that's just ahead of us, you can see as plainly as I that the dealers are the sources of whatever prosperity the industry will have in the future—as has been the case in the past—and, with all these things admitted, the thing that gets me is WHY NOT DO IT NOW?"

"I must confess," smiled Jim, "that the flour man's ad got me. Maybe it's a good idea after all."

GIVING NEW TRUCK DIGNITY TO THE USED TRUCK SALE

**Is Building Business and Spreading Truck Satisfaction in
Hartford for Taber-Rodgers, Inc. It Is Helping to Get
This Firm Back to Selling**

A SALES plan which the sponsors are pleased to term "constructive salesmanship, working along the lines of accomplishing a reputation and looking into the future," is now in force at Taber-Rodgers, Inc., Hartford, Conn. Concisely this plan has to do with the sale of rebuilt trucks. The plan is all very simple and logical and can be employed by any reliable truck establishment representing a standard vehicle and having the necessary and adequate service equipment. For, after all, this Taber-Rodgers idea may be classed as another and distinct phase of service—service of an advanced type. The worth of the idea is best proved by sales and sales in this instance have been and are being made even in these days when there is a lull in business. In fact this rebuilt truck idea fits in all the better in times such as these.

First of all Taber-Rodgers has modern equipment, a full fledged service station and a complete stock of parts. At the present time this rebuilt idea has to do only with Republic trucks.

PRIMARILY the proposition must be considered from the sales angle for it is obvious that Taber-Rodgers embarked upon the scheme with the idea of getting a fair share of business. The more the idea was considered the more certain the firm felt that what was offered the buying public would make an appeal. Nor was this a mistake.

Consideration must also be taken of the financial status of numerous truck prospects. It may be assumed for the sake of illustration that a trucking contractor has a fleet of vehicles and can use one or more additional units to advantage. The acquisition of the much needed additional units necessarily is attended by financial consideration. The contractor may desire a \$3,000 truck but he has not that much ready cash, doesn't care to go in on a time deal and CAN raise \$2,000. Now, then, when he calls on Taber-Rodgers he is impressed with the fact that he can secure a rebuilt or renewed truck that is 90 per cent as good as a new truck at 60 per cent of the price of a new truck. These two figures are a sales argument and they hit home. Not only that but the prospect secures a GUARANTEED article that is bound to give him several months service without any repairs. The renewed truck placed side by side with a new vehicle looks just as good and has all the ear marks of new equipment.

This is how Taber-Rodgers goes about the renewal proposition. The truck is stripped down to the chassis. Even the cab is removed. The wheels are taken off and the bearings looked over and, if worn are replaced. The springs and axles are also removed, new bushings, leaves, other parts applied. The steering mechanism receives like attention. If the body is badly worn a new one is substituted, in fact any of several types will be applied to suit the customer's needs.

The engine is disassembled and new parts put in where required.

Now here is an important fact. All

Selling the Rebuilt Truck Idea

BUY A GUARANTEED REBUILT TRUCK AND SAVE MONEY

Costs you less in the first place.
Its depreciation will be less.
Looks like a new truck.
Runs as good as a new one — and
Will cost no more than a new truck to operate.
Rebuilt under exactly the same method as originally
built at the factory. We guarantee you will be satisfied
with it.

REASONS ENOUGH FOR ANYONE.

At any rate, it will cost you nothing to investigate, and when you do, you will see the big money saving possibilities.
We rebuild these trucks by the factory method. By this we mean that a used truck is stripped of all units down to the bare frame. The units are all taken apart, cleaned and re-assembled with new parts wherever needed. They are then tested and reassembled in the chassis, and the completed truck is given a road test, after passing which it is sent to the paint shop and refinished. By following this thorough method we can truthfully say that our rebuilt trucks are *almost* as good as new all the way through, and moreover, this method permits us to give the following unusual guarantee.

OUR MONEY BACK GUARANTEE.

The purchaser of a Republic truck rebuilt by us will be protected to the extent that after having used it for a few days, should he find it unsuitable for his use, or should he find it not entirely satisfactory, we will refund to him all of the money which he paid us for it. We believe this guarantee will convince anyone that we are sincere in our statement that our Republic rebuilt trucks can be depended upon to give faithful service.
These trucks can be equipped with any type of cab or body suitable to your needs, and we will give you whatever assistance lies in our power to adapt the body and capacity of the truck to your requirements.

Call us up. Don't wait. Phone Bushnell 98

TABER-RODGERS, Inc.
REPUBLIC TRUCK DISTRIBUTORS
1212 MAIN STREET HARTFORD, CONN

Taber-Rodgers, Inc., Hartford, sells used trucks by rebuilding and guaranteeing them. The selling effort emphasizes that Taber-Rodgers rebuilt trucks are rebuilt along modern lines in vogue at the factories and guarantee satisfaction. The selling policy is concentrated in this postcard folder which goes to prospects

those parts are *carried in stock*, just as in a factory and there is a crew of real mechanics to put them into the truck. Even the tires are renewed so that when the torn down truck is reassembled it is as sound as the day it left the factory. Then the truck is given a hard road test with capacity load and all details checked up. This report coming back and showing the job to be up to standard, it is painted and everything receives attention down to the cab curtains. In fact nothing is omitted. Even a jammed fender, tail light, or other part is renewed to bring the car up to the best possible condition.

The renewed truck is then placed in the sales department alongside new trucks. The prospect thus has a chance to compare the rebuilt with the new cars. The buyer gets the car at a fair price, has a bona fide guarantee, gets service and protection. When he takes out a "T-R" rebuilt truck he becomes a booster as experience has shown. That's simple sales psychology.

All work done on the rebuilt truck is at regular labor rates of \$1.50 an hour; therefore no part of the work is charged to overhead. And full charge is made for all labor expended and the parts are charged at list price plus 10 per cent for handling. The full labor and parts charge provides a margin and actually permits of a profit which takes care of any needed after sales service. The car should run for three months after purchase without any especial attention just the same as a new vehicle.

William H. Vinal, treasurer of the company, says when prospects are shown the renewed trucks beside the new ones the impression is favorable to both. The man who wants a new truck may not be interested in a rebuilt article because he is one of that type that desires to get the first wear. There is another class

that expects new car service but does not want to pay the price but is willing to pay the price for a rebuilt car, when backed by a firm of established reputation.

Experience has shown that only a good class of trade is attracted to the proposition, that class which in fact knows truck values and buys accordingly, that is not trying to get a great deal for very little.

There is yet another angle, that rebuilt truck can be turned back any time toward a new truck purchase. Therefore, the owner has a tangible asset, something that he can cash in on when the time comes.

Some very favorable reports have been received by Taber-Rodgers from buyers of these renewed trucks. One buyer 50 miles from Hartford went to considerable trouble to let the firm know just how well the truck was working and how pleased he was. He was a booster,—one of many, by the way.

This renewed truck message is gotten across largely through the mail. William H. Vinal who also handles the advertising sends out from time to time printed matter which tells the story in a

simple yet forceful style. This direct by mail idea has worked out very well because it is sent to those who use trucks. The sales department neces-

Constructive Salesmanship in Used Trucks

THE truck as a transportation unit doesn't suffer from the used truck market's effect when the used trucks are sold on the plan followed by Taber-Rodgers, Inc., Hartford, Conn.

This firm rebuilds the used trucks, and sells with a guarantee from the new car sales floor. They are sold on the same merchandising plane with the new ones.

Read how.

sarily has a line of prospects and in those cases where the salesman is advised that the prospect cannot afford a new truck because it costs twice as much

as he can afford to pay, it follows that the salesman has a very logical argument in the renewed truck at almost half the price of a new one and on which depreciation will be less, costing no more for operation than a new truck and one rebuilt just as the factory would make it over together with a money back guarantee.

In studying the policy of the Taber-Rodgers company in the handling of used trucks one factor in the success of the business stands out prominently. This is service.

The success of the plan, in no small degree, lies in the fact that a well-balanced service department has been organized and its efforts linked to the sales department in a manner that gives that part of the business the highest kind of co-operative assistance.

It is apparent that without a well equipped, well organized and efficiently operating service department and in addition to this a well stocked parts department the Taber-Rodgers company's used truck selling method would be lacking in its most vital feature—that of spreading truck satisfaction by selling used trucks backed by the firm's guarantee.

How Another Hartford Dealer Sells Service

An Inviting Appearance, a Complete Stock of Parts and Real Salesmanship Is Getting Business for This Firm

AT this particular time dealers find it necessary to keep close watch on all ends and see that none are loose. The dealer who is loaded up with cars and finds it hard to sell will doubtless regard his situation as other than pleasant to contemplate.

There is a course for dealers of a certain type which provides sources of revenue aside from car sales, as evidenced in the activities of the Edward S. Clark Co., Hartford.

A well equipped service station carries the load for this concern, and carries it nicely. It occupies a one-story brick and steel building, 55 x 225 ft. On going into the service station work Clark cleaned house. He did the house cleaning very thoroughly and this process included cleaning the floors, formerly in the not unusual untidy condition.

Then he took stock of the equipment which was not to his liking. Clark knows good tools. Securing these he cast about for a man who knew something about all cars—how to handle people and send them away satisfied. Then, down the line he went injecting his own enthusiasm into his working personnel.

To-day Clark's place stands out like an oasis for the motorist who drives down Wethersfield Avenue. The cleanliness commands attention and invites patronage. Inside everything is ship-shape. The customer is met with a smile and

made to feel at home. He gets service in the true sense of the word. He is impressed—and that builds for future sales.

The Clark establishment carries a complete line of parts for all cars. Arrangements are made for the motorist to get parts service after closing time daily and Sundays. In fact, Clark sells this

strongly through his slogan: "Getting parts when you NEED them is Service."

In addition to these service features there is provision for car storage. With this equipment, a long list of steady customers has been cultivated and it is growing daily.

Clark is SELLING service.

Kansas No Place for Dead Ones

"THERE will be no graves in Kansas for the automobile dealers who are alive. The graves, if any, will be for those who are dead or those who are so dead that they don't know they are dead."

This was the consensus of opinion at the recent meeting of the board of directors of the Automobile Trade Association of Kansas held in Topeka. It was not a hasty decision or one arrived at because of its picturesqueness but a hard and cold summary of conditions by the board after spending more than an hour discussing informally the general conditions now facing the automotive industry in the sales, service, financial, car supplies, advertising in local association fields.

Progress in the move to have the United States highway reports extended

to cover all of the leading highways in Kansas was reported. The reports at the present time cover four important highways. In this move the association has the assistance of all of the Chambers of Commerce in the State and this force will be used to impress the Congressmen with the weight of opinion in favor of the highway reports.

A new scale of dues was adopted which covers yearly payments of from \$25 for dealers doing a business of less than \$50,000 annually to \$100 for those doing \$500,000 or more business annually.

In line with the action taken at the Salina Convention the association is preparing to install the emblem idea following the plan of the California Automobile Trade Association. The next meeting of the association is to be held some time in January.

Editorial Observation

Legislation and Unity Action

THE value of co-operation between manufacturers, dealers and owners in attempts to influence automobile legislation was strongly illustrated recently in New Jersey. When an effort was made to increase by approximately 50 per cent all classes of automotive registration fees the automotive interests of the State, both in the passenger car and truck fields, got together and drafted a program of opposition. Having obtained the assistance of the National Automobile Chamber of Commerce's legislative department, there was a conference at which representatives of producers, merchandisers and users of automotive vehicles outlined their arguments in the presence of the combined group. This made possible elimination of conflicting statements and a thorough co-ordination of argument, with the result that when the industry's side of the case was presented to the Senate committee considering the proposed legislation the bills objected to were dropped.

Then the automotive conferees made themselves into a permanent legislative committee, which has

gone ahead and suggested helpful legislation. And it was agreed that no group in the committee would take a stand on any proposal favoring or opposing such legislation until each of the other groups had been consulted.

This New Jersey idea is an important step in the right direction. With forty-two Legislatures in session this winter the automotive interests need to be alert to favor constructive and oppose destructive legislation and in virtually all cases they should and could have the support not only of manufacturers but of car owners and truck users.

Dealer associations, State and local, ought to be alert now to guard their interests in legislative matters and they ought never take the chance of working independently of the manufacturer and owner interests. A conference such as was held in New Jersey probably would be able to compose differences of opinion on legislation in almost any State and enable people to go before their legislators with a united front.

Ads in the Movies

IN planning his advertising, the dealer or garage-man should not overlook the possibilities of his home town motion picture theater. Films and "still" slides are available for automobile, truck, tractor, accessory, tire and service advertising, and where they have been used they have given good results. Some dealers who have added local "color" to the standard productions of film producers have made especially strong appeals to their public, with resultant increases in business.

The movies are real community gathering places, particularly in the smaller towns, and where newspapers are lacking or are published only once a week the screen presents an opportunity otherwise denied to the automobile man to talk to the home folks when they are at ease and in a receptive mood.

Some manufacturers provide films; others can tell their dealers how to get them. In a year that is going to call for exercise of the maximum of every dealer's selling ability, advertising—in newspapers, by mail

and by outdoor and indoor display—will require more than ordinary study and action.

It is interesting to note that the textile industry is taking steps to bring about wider recognition of the sacredness of contracts, the object being, of course, to curtail cancellations which have worked havoc in this as well as other industries in the past few months. It is a movement that might well be taken up in all trades. From consumer to dealer, to jobber to manufacturer there ought to be an appreciation of the fact that an order for goods is not something to be filled or forgotten according to the later whim of the buyer, but a contract with a definite moral obligation. When there is general recognition of this fact there will be fewer sharp ascents and descents in the curve of business. Let's preserve the sacredness of contracts.

Here's a thought: In one way at least the man who has at his command only street car conveyances is a better prospect than the motorist. The street car rider doesn't own a used car.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD's legal editor to discuss the question?

The Lien in Connecticut

Editor Motor World: We are not clear as to the operation of the lien law in Connecticut covering parts and supplies for motor vehicles.

Suppose, for example, that we sell a set of tires and that the owner of the car or truck does not pay the bill. If this car was bought on a conditional bill of sale and is not yet fully paid for, have we any right under the lien law to attach the car or to possess it as security for payment of the bill?

The point we wish to establish is whether tires come specifically under the provisions of the lien law. If a person who supplies parts and labor for a motor vehicle has a prior lien over the conditional bill of sale, then would not tires come under the heading of parts and supplies?—J. M. H., Newington, Conn.

Answer—I do not understand that Connecticut has a real garageman's lien of law. Hubbell 1920 Edition does not mention such a lien under the heading of "Liens" either. If you only have a common law lien—the right to hold a car for materials furnished and services rendered—the conditional bill of sale of course comes first, and I do not see how you can recover under a claim of lien for tires sold except in a civil action where you may sue to collect the indebtedness.

Enforcing Lien

Editor Motor World: How soon can a car in Vermont be taken by the holder of a lien note on it after an installment is due and payable and such installment is not paid when due?—C. S. G. Garage, Springfield, Vermont.

Answer—If you mean a conditional sale note when you say a lien note, you can enforce your lien after 30 days after the condition is broken, the same way that chattel mortgage liens are enforced. I say you can enforce it—but I mean you can enforce it through your attorney as it is a technical proceeding.

A Lien Law Inquiry from Illinois

Editor Motor World: Would a garageman be allowed to hold a car until the work is paid for?

Will you write me direct telling me the situation regarding the lien law in my State?—A. J. F., White Heath, Ill.

Answer—He would. There is a garageman's lien law in Illinois. It was published in full on the legal page of

Motor World, issue of Nov. 27, 1918. If you have not kept this copy of Motor World you can procure one by writing to the Secretary of State of Illinois.

If you give up possession of the car you can retake it by instituting an action of replevin. If you hold the car the owner must pay you before he can get it back.

Responsibility of Rented Cars

Editor Motor World: Under your law department page will you kindly tell us what the liability law is, as for example: We loan a delivery car to a commercial concern while we repair theirs. Now suppose their driver meets with an accident while using our car. Would we have to stand the expense or liability, if any, and what proceedings should we take to protect ourselves when loaning cars in this manner, or would it be necessary that we send our own driver?—M. M. CORP., Buffalo, N. Y.

Answer—Sit down and figure out whose servant drives the car and whose business he is engaged in at the time of the accident. That is what controls in New York. Merely loaning or renting a car does not make the owner responsible. Renting a car with a driver does if the owner retains control of his employee and can tell him where, when, how, and at what speed, etc., to go.

Such Contracts Not Binding

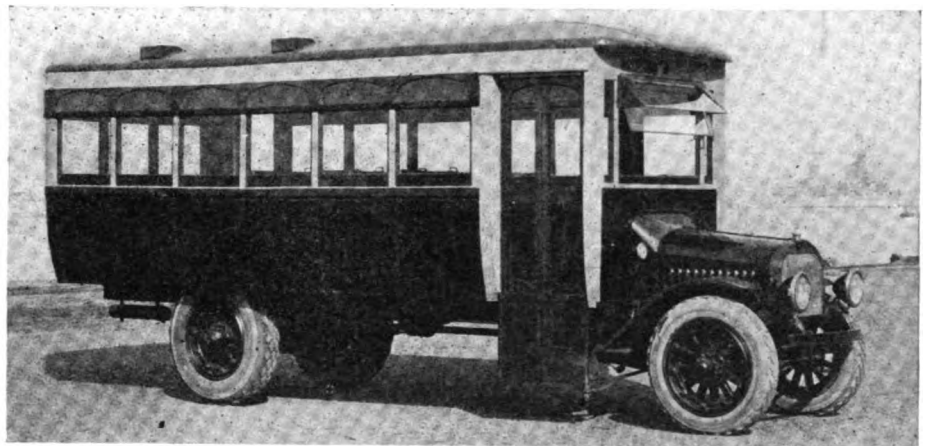
Editor Motor World: Situated as we are in a small town, it is always more or less of a problem to get competent mechanics in the spring of the year when we need them the most. Our policy has been to keep our men on the payroll right through the slack winter season, in order to have them when we do need them, but there are always some of them who will stay through the winter when there is not much to do, and will then quit in the spring and take some other work which pays them better, such as farm tractor work.

Can you suggest some form of a contract which would furnish us with protection, or if you have any other solution we would greatly appreciate it.—G. C. M. Co., Sidney, Mont.

Answer—Of course you can go ahead and make a contract but I do not know as it will be of much help to you in your case. Of course if you engage skilled mechanics or opera singers, etc., and you have a contract you can enjoin them from that particular work for others. You cannot enjoin an opera singer from working as a farm hand or vice versa.

The best practical thing you can do is to arrange for some system of paying a bonus or holding back part of the salaries—if they will agree to the latter arrangement.

The New Mack Jitney Body



This bus body is constructed of steel, including underframe, side panels and roof. Seats either of cane or leatherette are placed cross-wise; interior fittings are made to stand severe service; interior lighting is provided; ventilators are installed; the windows are provided with curtains; illuminated destination signs and exhaust heating for cold weather are also provided. These bodies are being built by the International Motor Co. for mounting on Mack chassis

A Department of BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 173

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Standard Operations on Overland Four Brakes

Eleven Operations in Detail with Time Limits Set by the Overland Factory

1—To Remove and Replace Outer Brake Operating Tube or Inner Brake Operating Camshaft—Time, 30 minutes

1—Jack up rear wheel and remove hub cap.

2—Remove cotter pin and nut from axle shaft.

3—Pull off wheel with special puller.

4—Remove cotter pins from brake tube levers and remove clevis pins.

5—Remove inner brake band.

6—Drive two 3/16-in. pins from hand brake lever next to rear axle center housing.

7—Pull out inner brake shaft.

8—Remove the brake tube.

9—Set service brake tube in position.

10—Put in inner brake shaft.

11—Assemble inner brake shaft lever and pin securely to shaft, using two 3/16 x 7/8-in. pins.

12—Connect brake rods with clevis and cotter pins.

13—Install inner brake shoe by assembling on anchor stud and locking with springs.

14—See that axle shaft key is in position.

15—Pack rear wheel bearing with grease.

16—Install rear wheel, locking with nut and cotter pin.

17—Install hub cap.

18—Remove the jack.

19—The same series of operations is also used to replace the operating cam brake shaft.

2—To Remove and Replace Outer Brake Support Stud Springs—Time, 15 minutes

1—Jack up rear axle.

2—Remove rear wheel hub cap.

3—Remove cotter pin from rear axle and remove nut.

4—Pull wheel with wheel puller S. D. 267.

5—Remove cotter pin and plain washer from brake support stud.

6—Pull brake band from stud.

7—Remove support stud spring from bracket on brake band.

8—Replace spring and assemble brake band on brake support stud.

9—Put on plain washer and cotter pin in support stud.

10—See that rear axle shaft key is in position and put on wheels.

11—Put on axle shaft nut and cotter pin.

12—Put on hub cap.

13—Remove jack.

3—To Remove and Replace Hand Brake Rod—Time, 10 minutes.

1—Disconnect rod at hand brake lever by removing wing nut.

2—Remove cotter and clevis pins at torsion tube lever and remove rod.

3—Remove spring from rod.

4—Connect to brake lever at torsion tube end with clevis and cotter pins.

5—Install spring on new rod.

6—Connect rod to hand brake lever with wing nut, and adjust.

4—To Reline Inner Brake Band—Time, 45 minutes for both brakes

1—Jack up rear wheels.

2—Take off hub caps.

3—Remove axle nut cotter pin and nuts.

4—With wheel puller S. D. 267 take off wheels.

5—Disconnect two brake retracting springs.

6—Remove brake bands.

7—Cut rivets and remove band linings.

8—Install new brake linings; use pointed drift to punch holes in new linings. Countersink holes sufficiently to draw rivet heads well under surface of lining to insure against heads rubbing brake drum.

9—Install brake bands.

10—Connect brake band retracting springs.

11—See that axle keys are in position.

12—Pack wheel bearings with grease.

13—Install wheels on axle shaft.

14—Put on axle shaft nuts and cotter pin.

15—Put on hub caps.

16—Adjust brake at hand lever with

wing adjusting nut till the brake holds.
17—Remove jack.

5—To Reline Outer Brake Band—Time, 1 hour for relining both brakes.

1—Jack up rear wheels.

2—Remove hub caps.

3—Remove cotter pins from axle nuts and take off nuts.

4—With wheel puller S. D. 267, pull wheels.

5—Remove cotter pins from outer brake band lever link pins.

6—Remove link pins.

7—Remove 5/16-in. nut and lock washer from brake band adjuster guide.

8—Remove cotter pin from brake band adjuster guide.

9—Remove brake band.

10—Remove brake band adjusting nuts.

11—Remove cotter pins from brake band lever connecting levers to brake bands.

12—Remove brake levers and adjusting rod assemblies.

13—Cut brake band lining rivets and remove old linings.

14—Install new lining. Use pointed drift to punch holes in band lining, countersink holes sufficiently to draw rivets well under surface of brake lining, to insure against heads rubbing brake drum.

15—Assemble adjusting rod and lever assemblies with pin and cotter pins at brake band ends, with brake adjusting wing nuts.

16—Put brake band assembly in position, slipping brake adjusting guides in holes and brake anchor bracket over brake anchor pins.

17—Put washers on anchor pins and cotter pins.

18—Put lock washer and nut on brake adjusting guide and tighten securely.

19—See that rear axle keys are in position.

20—Pack wheel bearings with grease.

21—Put wheels on axle shafts.

22—Put on axle nuts, tighten and insert cotter pins.

- 23—Put on hub caps.
- 24—Put in brake lever link clevis pins and cotter pin.
- 25—Lock both front wheels.
- 26—Jack up both rear wheels.
- 27—Start engine and place gears in speed.
- 28—Adjust brakes so that they apply equally to each wheel.
- 29—Remove blocks and jack.

6—To Remove and Replace Foot Brake Rod—Time, 10 minutes.

- 1—Remove foot brake front rod.
- 2—Disconnect retracting spring from brake rod.
- 3—Remove clevis and cotter pins at brake pedal end.
- 4—Remove clevis and cotter pins at torsion end.
- 5—Remove rod.
- 6—Replace with new rod.
- 7—Connect to torsion tube lever end with clevis and cotter pin.

- 14—Put on wheel, making sure that key fits properly in keyway of rear wheel hub.
- 15—Tighten wheel securely on tapered axle with axle nut and cotter pin.
- 16—Put on hub cap.
- 17—Take out jack.

8—To Adjust Outer Brake—Time, 15 minutes.

- 1—Block up front wheels.
- 2—Jack up rear axle until wheels clear the floor.
- 3—Start engine.
- 4—Put transmission in gear.
- 5—With mechanic operating brake pedal, inspect the action of the brake band upon the rear wheels.
- 6—The brake should be so adjusted that both brakes take hold simultaneously. To insure brake band clamping brake drum evenly, loosen adjusting nut on brake adjusting rod directly under rod guide, as shown in Fig. 1, and tighten

10—To Remove and Replace Rear Wheel Bearings—Time, 15 minutes.

- 1—Jack up rear wheel.
- 2—Remove hub cap.
- 3—Remove cotter pin from axle shaft nut and remove nut.
- 4—Pull wheel with wheel puller S. D. 267.
- 5—With wheel puller S. D. 275 pull wheel bearing.
- 6—Replace new wheel bearing, packing with grease.
- 7—See that axle shaft key is in position.
- 8—Put on rear wheel.
- 9—Install rear axle shaft nut. Tighten and cotter pin.
- 10—Put on hub cap.
- 11—Remove jack.

11—To Remove and Replace Rear Wheel Hub—Time, 45 minutes.

- 1—Jack up rear axle.
- 2—Take off hub cap.

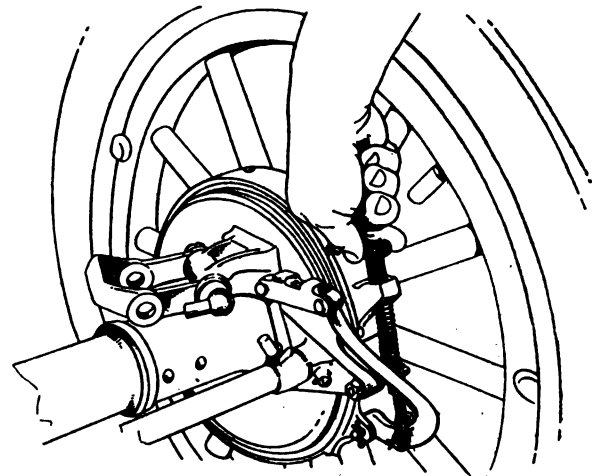
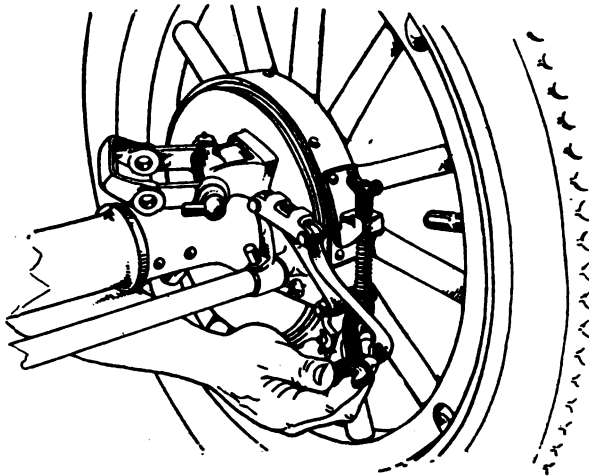


Fig. 1—Loosening the adjusting nut preparatory to equalizing the outer brakes. Fig. 2—Adjusting the outer brake by turning the thumb nut up or down

- 8—Connect to foot brake pedal with clevis and cotter pin.
- 9—Connect brake rod retracting spring.

7—To Remove and Replace Outer Brake Band Anchor Stud—Time, 20 minutes.

- 1—Jack up rear axle.
- 2—Take off hub cap.
- 3—Remove cotter pin from rear axle nut and remove nut.
- 4—Remove rear wheel, using wheel puller S. D. 267.
- 5—Take off $\frac{3}{8}$ -in. nut and washer holding anchor stud to rear axle housing.
- 6—Remove cotter pin at brake band end of stud.
- 7—Pull brake band out far enough to allow stud to be driven off. Drive out stud.
- 8—Pull brake band away from housing far enough so that stud can be installed.
- 9—Put on lock washer.
- 10—Set $\frac{3}{8}$ -in. nut tightly.
- 11—Depress anchor stud spring in brake band stud bracket and assemble brake band on anchor stud.
- 12—Put flat washer on stud and cotter pin.
- 13—Fit key to anchor shaft. Pack wheel bearing with grease.

wing nut, as shown in Fig. 2, illustrated herewith.

7—When brakes are properly adjusted throw transmission out of gear, stop the engine and remove the jack from rear axle.

9—To Remove and Replace Rear Axle Grease Retaining Washers—Time, 15 minutes

- 1—Jack up rear axle.
- 2—Remove rear wheel hub cap.
- 3—Remove cotter pin from rear axle shaft nut and remove nut.
- 4—Remove wheel drive with wheel puller S. D. 267.
- 5—With screw driver, remove steel washer.
- 6—Remove grease retaining felt washer.
- 7—Install new felt washer.
- 8—Install steel retaining washer.
- 9—See that rear axle shaft key is in position.
- 10—Replace rear wheel on shaft.
- 11—Put on rear axle shaft nut. Tighten and cotter pin.
- 12—Put on hub cap.
- 13—Remove jack.

3—Remove cotter pin from axle shaft nut and remove nut.

4—Remove wheel with wheel puller S. D. 267.

5—Pull off wheel bearing with wheel puller S. D. 275.

6—With chisel split wheel hub nuts and drive hub bolts from hub.

7—Remove brake drum.

8—Block wheel securely to prevent dishing and drive out hub.

9—Put in new hub, be careful that holes in hub align properly with holes in wheel.

10—Lock wheel so that hub can be driven in without danger of dishing.

11—Put on brake drum.

12—Put in new hub bolts in nuts.

13—Draw nuts securely and rivet ends of bolts in nuts to prevent nuts becoming loose.

14—Install dust washer.

15—Pack rear wheel bearing with grease and install on wheel hub.

16—Fit axle shaft key in installed wheel.

17—Put on axle shaft nut. Tighten and cotter pin.

18—Put on hub cap.

19—Remove jack.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Filling Station Design Depends on Character of Demand

*A Well-Designed Station Handles a Maximum Gallonage
with a Minimum Operating Expense—Uniform Demand
Most Profitable*

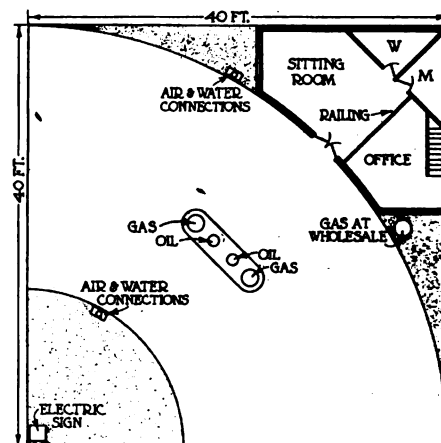
FILLING stations may be divided into two classes—those that are subject to rush hours, and those which have a comparatively uniform demand. In the first case pump equipment and driveway space must be provided to take care of the peak in the demand without delaying service to the customer, who expects promptness more than anything else from the filling station. Consequently the first cost of a station that is subject to rush hours will be large due to the added investment for property and equipment. This type of station can not be as profitable as one that sells the same daily gallonage, but on which the demand is fairly uniform. The first cost of such a station will be less than in the first instance, and the overhead will consequently be less. Furthermore it will take fewer operators to serve the customers under conditions of uniform demand, which means a further reduction in operating expense.

Experience has shown that the most

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

profitable filling station is located in the residential part of town, where it serves the same customers day after day. This type of customer is a source of income on which the station can depend. Some of the customers will be business men who will drive in to get their tanks filled



Filling station on corner lot 40 x 40 ft. There are two 5-gal. pumps, each being supplied from a 1000-gal. tank



The covered driveway is not necessary according to the latest practice in filling station design

on the way to business; others will be ladies who will come in the afternoon. In this way the demand is not bunched in any one part of the day.

It is almost universal practice for the filling station to provide air and water service free. There is no reason for this other than custom, but it does not seem to be possible to break away from it at this time. However, the air and water service should not interfere with the filling station business, because the gasoline and oil pumps are what pay the profits. Often the mistake of placing the air and water connections close by the pump, is made. This means that a car that is obtaining air and water occupies the space at the pumps that might better be taken up by a gasoline customer. Consequently the air and water connections should be so placed that they do not interfere with the use of the gasoline pumps. In the layout, we have placed them on either side of the driveway, and in such a position that the car must leave the pumps to use them.

The advisability of combining the accessory business with the filling station

is open to some question. There is no doubt that accessories can be sold by the filling station, but some contend that the profit on these sales do not compensate for the loss in volume of gasoline sales. While the accessory is being sold, the car is stopped at the pumps and consequently, if another car drives in, it will be delayed. If it is desired to sell accessories, the best thing to do is to separate the accessory store from the filling station, and to so place the store that it does not interfere with prompt service at the pumps.

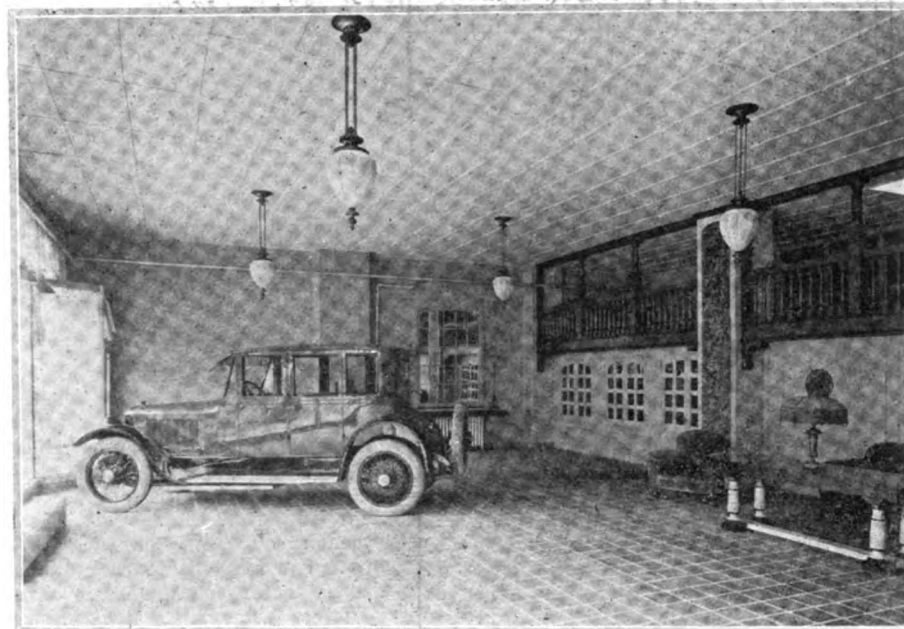
Covered Driveways

The value of a covered driveway is also doubtful. Of course, it affords protection in inclement weather. But the number of rainy days in a year is comparatively small and furthermore, but a very small percentage of the customers leave their cars while their tanks are being filled. For this reason, the covered driveway is not being used in the most modern stations.

Visibility should be a very important characteristic of the filling station. It should have signs which can be read at a glance at a distance of several hundred feet. Just the word GASOLINE is as effective as anything. Remember that it takes time to stop a car, so give the driver plenty of time to make up his mind to stop and buy gasoline after he sees your sign.

The comfort of the customer is taken care of in this station by the provision of a small sitting room and laboratories. The building also contains the office, and the heating plant is in the basement. The power driven pump for the sale of gasoline at wholesale is also located here. The gasoline storage tanks may be located either under the grass plot or under the driveways. We would recommend two 5-gal. pumps and two 1000-gal. storage tanks for the sale of gasoline at retail.

In planning the filling station, there are two things to be sought after—maxi-



This is the new showroom of the Buxton-Wysong Motors Co., Kansas City dealer in the Winton Six and the Scripps-Booth cars. The showroom is 58 ft. wide and 32 ft. deep with offices and accessory departments at the rear of the room, back of which are the used car and mechanical departments. The floor of the showroom is covered with large soft-red tile, the walls are sponged stippled gray and tan, and the woodwork of mellow gray, with the overhanging balcony above the offices of red, trimmed with black. We think that if we were a prospect and got settled in one of the big comfortable chairs, shown in the picture, that it would not be a very hard job to sell us a car

mum sales volume combined with minimum operating expense. The profit on the individual sale is small, so the cost of making that sale must be reduced in every practical way.

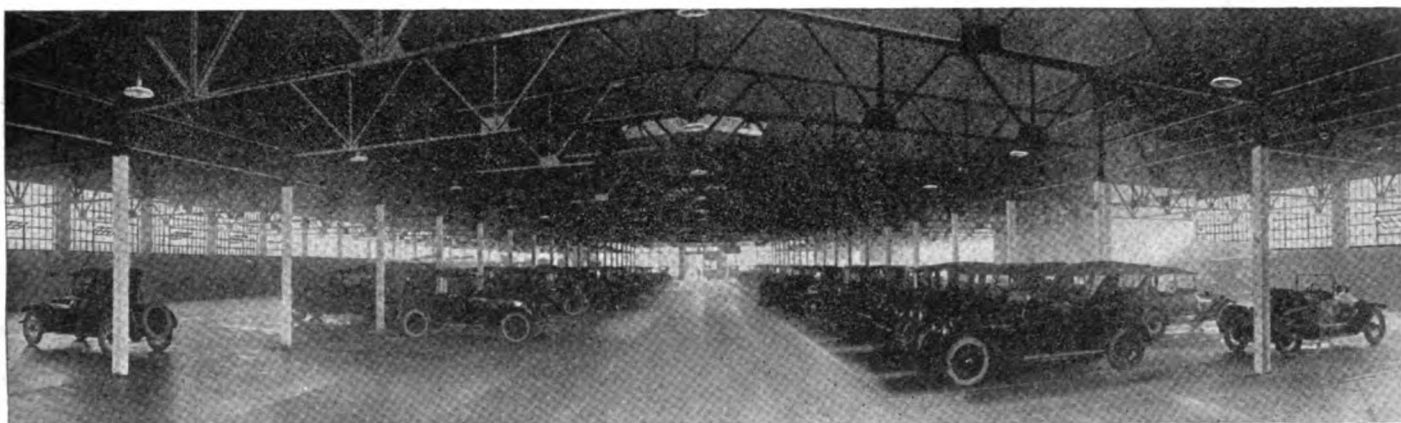
Bus Legislation Recommended

HARTFORD, CONN., Dec. 31—Commissioner of Motor Vehicles Robbins B. Stockel, in his report recently submitted to the governor, recommends State legislation rather than municipal ordinances for the regulation of jitney traffic,

which subject is very much in the public mind owing to the bitter fights being waged between the jitneys and the trolley companies throughout the State. The jitneys have been ruled off the streets where trolleys run in some of the cities.

That accidents on the streets and highways may be curbed, the commissioner suggests a pedestrian law which would make a careless or reckless pedestrian as liable to prosecution as a careless car operator.

Plenty of Daylight Here



From the standpoint of daylight, ventilation and fire protection, the newly completed Crosstown Garage, in Detroit, is interesting. Its capacity is 1600 cars. The building is constructed entirely of concrete, steel and brick, and large areas of window walls were used in its wall construction, to light and ventilate it. Daylight is distributed to all parts of the garage through the walls of Fenestra windows which, with numerous ventilators, make the speedy clearance of smoke and gases an easy matter

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Another Dealer's View of the Tire Market

A tire dealer wrote Motor World the other day, saying some pertinent things about the practices of certain manufacturers and pleading for a cleaning up of unfair competition if legitimate dealers are to stay in the tire business. This dealer is in business in Indiana and here is what he has to say:

Editor Motor World: The dealers who have not put in their orders for tires and tubes for next spring will soon be compelled to show their hands or be in bad with the distributors of these accessories.

So far the writer can see little change in the policy or the attitude of the different manufacturers. It is a safe bet that there is a very small percentage of legitimate dealers who are really satisfied with the policy and, in some cases, the treatment from tire manufacturers in general.

One of the worst evils as we see it through our "periscope" is reserving the right to sell tires to car dealers (whose cars use certain tires as factory equipment) at cost. Suppose Remy, Willard, Borg & Beck, Timken and other accessory manufacturers were to reserve the same right. The writer knows one dealer who used to (and does yet) get sizes which were not even used on his cars and as he is a price cutter you can readily see what unfair competition this kind of a "bird" makes. It is a "cinch" the car dealer is not going to lose the sale of a car over a spare tire. Another one is the fellow who has two or more cars and possibly a fleet of trucks. He goes to the nearest branch and puts up the plea that he has so many trucks, "and of course we use your tires and we want our pneumatics at cost." He usually gets them.

We know of several cases in our city exactly as we have stated above. Would it not be just as reasonable for the farmer or any other man who has a large family and keeps up a large house to go to the wholesale grocer, furniture man, carpet man, etc., and say, "I use lots of your kind of goods; let me have them at wholesale." Then we have the "guy" who refuses to pay a profit on anything. He always has a way of "getting" it. The writer knows of cases where tires are bought through garages who have been out of business for two years. For example: A man comes into a branch and says, "I want two 34 x 4 cords; these are for Smith's Garage but I will just pay for them." In a great many

instances the clerk who waits on his customer never investigates to see whether there is such a man as Smith in the business or not, or to see whether Smith has quit business or not. About all he is interested in is getting rid of those tires and raking in the money. These "pet" theories on selling car dealers at cost whose car happens to carry a certain tire as factory equipment is unfair to tire dealers who carry a stock of tires. If that is fair it would be just as reasonable for all the car accessory companies to do the same thing. Let the car dealers who expect protection in price put some money into a stock of tires and tubes and by so doing show the real dealers they are in the business, and then we will have no kick coming. In the writer's mind, if something is not done soon it will not be many years until the real dealers will be driven out of business entirely. Even now it is almost to that stage.

As to the "gyp," let him be compelled to handle "gyp" goods. The distributors will get the same volume through their legitimate dealers as they will by having grocers, postmasters and crossroad garages included on their books and at the same time have a much smoother business, also paving the way for the real dealer to push the business.

As for competition, I say, "The more the merrier," and I am conceited enough to be willing to take my chances with any of them provided they play fair. Now, fellow dealers, if you expect to stay in the business I think you will partly, at least, agree with me that it is high time the manufacturers give the real dealers consideration at times other than "Selling and Selling."

Should the Filling Station Sell Accessories?

One of Motor World's readers thinks that it should not. We would be glad to print other expressions of opinion on this subject.

Editor Motor World: Some time ago you published a plan for a filling station in the Scientific Construction Department, and an accessory store was included in the layout. In the description of this plan, it was stated that there was an opportunity to sell accessories while the car was having its tanks filled.

This is true, but I have not found it advisable to combine the sale of accessories with my filling station business. The profit from the filling station depends on making a large volume of sales, and

this means that the number of cars stopping at the station must be as large as possible. It has been my experience that selling accessories reduces the capacity of the filling station. The car is stopped in front of the pumps while the salesman is endeavoring to sell some accessory, and if another customer drives up, he cannot get his tanks filled because the pumps are blocked.

It is just a matter of "Robbing Peter to pay Paul," and I have not found that the profits from the sale of accessories balance the loss in filling station business. Perhaps some of Motor World's readers have other ideas on this particular subject.

Here's a Dealer Selling Trucks by Novel Methods

A reader of Motor World has written the following letter, which sounds mighty good in view of present conditions in the truck business:

I had the privilege this week of visiting one of my former dealers, R. L. Rice, of Grand Rapids, Mich., Western distributor for the Jumbo trucks, and found a trade story that is worth your editorial attention.

Rice began business two years ago handling trucks exclusively. He started without capital, with no place of business, financed his first trucks on bank credit, and in twenty months acquired a net worth of \$47,635.42, according to a certified audit just made. He is now building one of the largest exclusive truck establishments in Michigan and has sold twice as many heavy duty trucks during the past year as any other dealer in his territory.

He has never sold a single truck at less than full list price, has obtained not less than 15 per cent profit on all trade-ins, and has sold only one solid tired truck since he started in business. When other dealers sat back and said there were no sales to be had during the period of depression since July, Rice worked all the harder and kept his sales above normal.

Several months ago Rice hit upon a plan that has proved successful for increasing sales. He secures a road building contract and then sub-lets it to parties who will buy a fleet of his trucks for hauling the gravel and road material. He has sold about fifty trucks in this manner. He also operates a department for finding hauling jobs that will keep the trucks he has sold busy earning profits for his truck owners.

Repairshop Shortcuts

No. 2796—Bench Block—A large piece of steel is set into the top of the bench near the vise. It provides a handy place for cutting material off with a chisel, and saves the vise, which mechanics use for this purpose.—Chas. H. Willey, Concord, N. H.

No. 2797—Replacing Radiator Hose—When the water outlet on the engine and the radiator inlet are very close together, the hose can be slipped on quite easily if it is kinked as shown.—Frank L. Erdmann, St. Charles, Mich.

No. 2798—Draining Heavy Oil—A hole is drilled in the large plug in the barrel. This hole is the same size as the ordinary inner tube valve. The valve is inserted in the hole, and the joint made air tight with a rubber washer. A tire pump is used to force the oil out of the barrel.—R. A. Rentz, Lake Providence, La.

No. 2799—Handy Rack—This is a rack for the cleaning tools used around the shop. The construction is very simple as will be seen from the accompanying sketch.—Charles H. Willey, Concord, N. H.

No. 2800—Special Vise Clamp—A parallel jaw clamp with one long tail jaw, as shown in the sketch, is handy for holding a small piece that cannot be held in a convenient position in a vise.—Charles H. Willey, Concord, N. H.

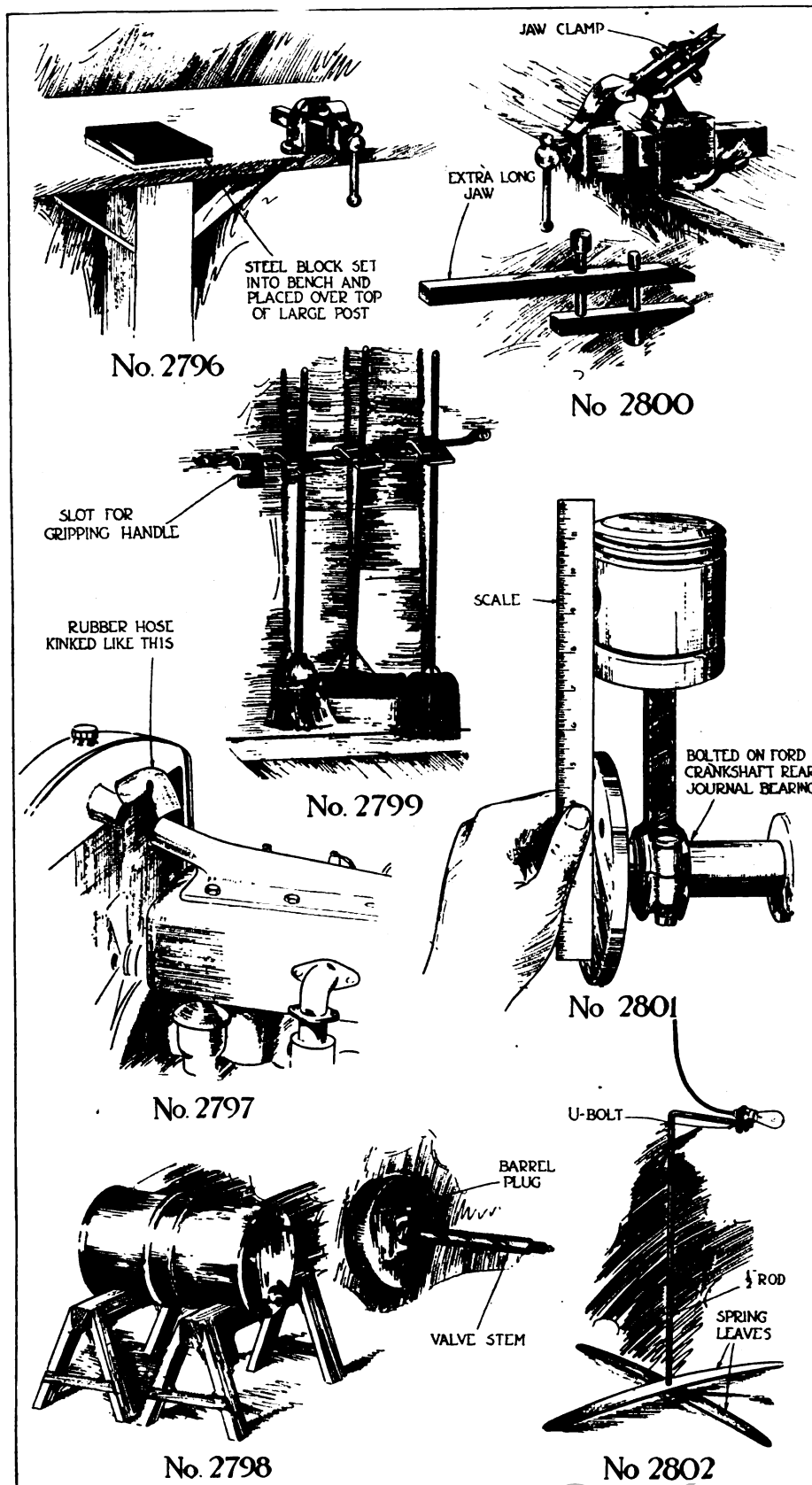
No. 2801—Connecting Rod Alignment Jig for Fords—When a special jig for this purpose is not available, the connecting rod with piston may be mounted on the crankshaft rear bearing and tested as shown.—H. R. Miller, Auto Inn Garage, Eustis, Fla.

No. 2802—Stand for Drop Light—The base of this stand is made of two old springs leaves. At their intersection, an upright rod is mounted. This rod is bent over at a point about four feet above the floor, and the lamp placed in a U-shaped piece fastened to the end.—H. R. Miller, Auto Inn Garage, Eustis, Fla.

MAKE A DOLLAR

SEND in a sketch and a brief description of the device you used to solve some particularly difficult problem. Sign your name and furnish us with the name and address of the concern with which you are connected.

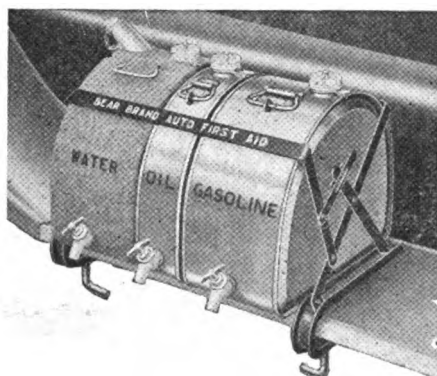
Motor World will pay a dollar for every idea accepted for publication.



Automotive Equipment

BEAR BRAND AUTO COMBINATION

This equipment consists of three canteens, one for water, one for oil and one for gasoline, which are clamped in a holder, which is in turn fastened to the runningboard of the car. The holder is made entirely of steel, and is fastened to the runningboard by means of two channel steel clamps. The front bar of the frame is hinged and can be easily opened to remove the canteens when necessary. One bar of the holder and the handles of the canteens are provided with adjustable rubber cushions to avoid all rattling. No buckles or web straps are used on this holder. Each canteen is provided with a faucet which makes it easy for the user to fill the crankcase or gasoline tank directly from the canteen. All the screw caps are provided with nickel-plated chains which prevents them from being lost.—Woolwine Metal Products Co., Los Angeles.



Bear Brand Auto Combination



Ambu Service Manuals

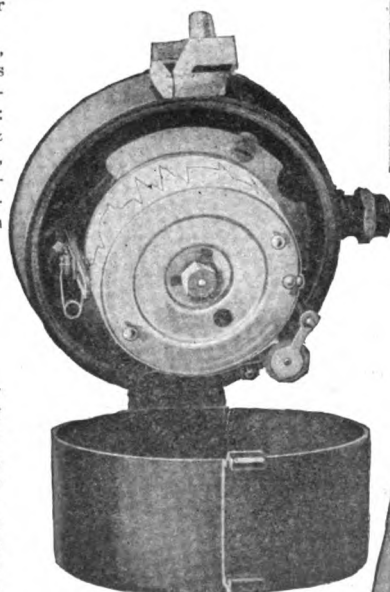
AMBU SERVICE MANUALS

The following are some of the points covered in these manuals: Internal wiring diagrams; description of details of construction; generator and motor characteristics; instructions for adjusting the various units of the system and instructions for tests.

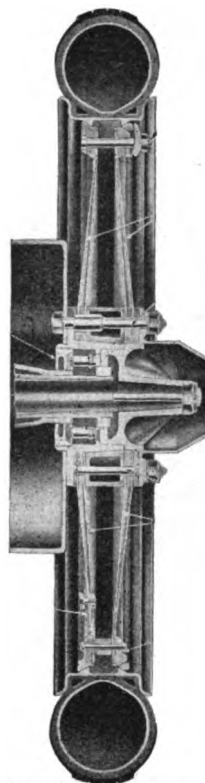
Five manuals are now ready, and each covers the apparatus manufactured by a single company. Prices are as follows: Autolite system, \$1.00; Gray & Davis, \$1.50; Remy, \$3.00; Delco, \$3.00; Westinghouse, \$4.00.—American Bureau of Engineering, Inc., 1601 South Michigan Avenue, Chicago.

RECORDOGRAPH

An instrument for recording graphically the movements of an automobile or truck. It consists essentially of the clock, the recording device and the pencil mechanism. The recording mechanism is driven through a worm by a flexible shaft. This in turn rotates an electric cam which actuates the pencil mechanism. A clear and distinct record of time, distance, speed and stops is made on the tape. Price, \$65.—American Taximeter Co., Broadway at Sixty-first Street, New York City.



Recordograph



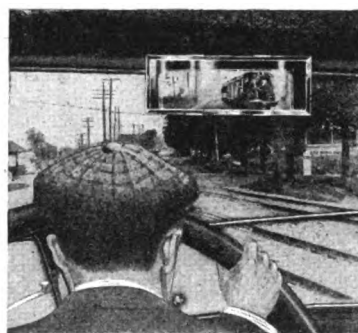
Multidisc Wheels

MULTIDISC WHEELS

In this type of wheel the load is carried by four disks. The inner disks are stamped out of aluminum sheet, and the outer disks, formed and assembled in the same manner as the inners but with greater taper, may be of any material. The wheel is driven by six lugs which are riveted into the hub flange. Bolts, which screw into these driving lugs, hold the wheel on. The opening for inflating the tire is located either on the inside or outside of the wheel as desired. These wheels are fitted with standard demountable rims, and are furnished to fit any cars.—Lack Mfg. Co., Paducah, Ky.

I. C. U. PRODUCTS

Included in this line are the following products: engine enamel, black, gloss or dull finish; cylinder and engine enamel, black, gray and aluminum; leather and mohair dressing, black; neatsfoot oil; hand soap; nickel polish; metal polish in both powder and liquid form; liquid cleaner for japanned parts only; body polish; tire paint; shellac; gasket cement. These products are put up in various sizes of containers ranging from the small can for the use of the car owner, up to the large sizes for the big service station.—Livingston Co., New Haven, Conn.



Pioneer Mirrorscope

PIONEER MIRRORSCOPE

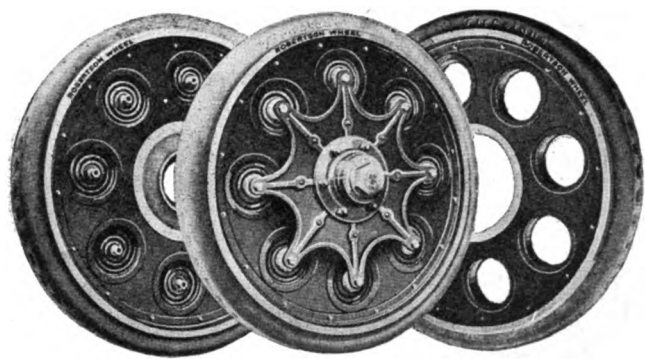
This device attaches to the top of the windshield of open cars, and just above the windshield on enclosed models. A clamp is provided for attaching the device. Dealers are furnished with boards on which six mirrorscopes are mounted for counter display.—Brewer-Titchener Corp., Cortland, N. Y.

PERKINS-CAMPBELL BRIEF CASE

This case is made of saddle leather. It has a solid bottom and is so reinforced that it will stand alone. Convenient pockets are provided for spark plugs, wrenches and other accessories. There are roomy compartments for catalogs, order books and sales literature. It is especially designed for the use of the automotive equipment salesman.—Perkins-Campbell Co., Cincinnati.



Perkins Campbell Brief Case



Roberts Resilient Wheel

ROBERTS RESILIENT WHEEL

This wheel has a series of housings near the rim for the cushioning elements. These housings are flanged to preserve the alignment of the spiral cushioning springs. Within these cushioning elements is suspended the spider portion of the wheel, which is in turn fastened to rubber-cushioned hub. There are large hard fibre washers around the hub and within the spider plates, which check the lateral displacement of the rim in the event of skidding. It is suitable for use on either cars or trucks.—Roberts Resilient Wheel Corp., Chicago.



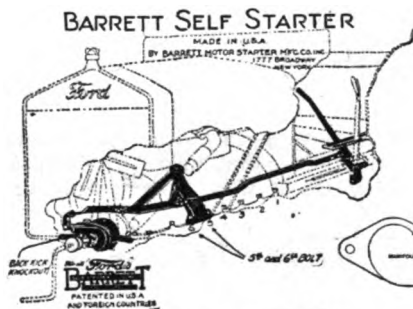
Cross and Square Tread Firestone Tire

CROSS AND SQUARE TREAD FIRESTONE TIRE

The idea behind the design of this tire is the elimination of localized tension at any point on the tire. The Cross and Square tread is zig-zagged in such a manner that recesses cannot run any considerable distance in one direction. At the same time, the numerous different angles are said to offer greater traction and anti-skid effect.—Firestone Tire & Rubber Co., Akron, O.

BARRETT SELF-STARTER FOR FORDS

A combination cranking and priming device for the Ford car. The engine is turned over by pulling back on the starting lever, which is installed next to the brake lever. The starting lever is connected to the front end of the crankshaft through a suitable linkage. The primer sprays gasoline into the intake manifold in close proximity to the intake ports. Price, \$25.—Barrett Motor Starter Mfg. Co., Inc., 1777 Broadway, New York City.



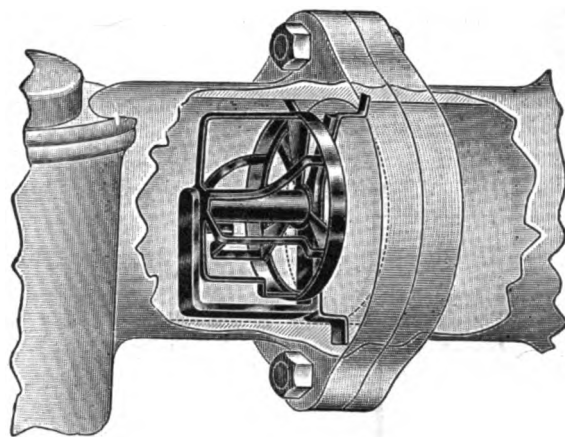
Barrett Self-Starter for Fords



Hoyt Cadmium Test Voltmeter

HOYT CADMIUM TEST VOLTMETER

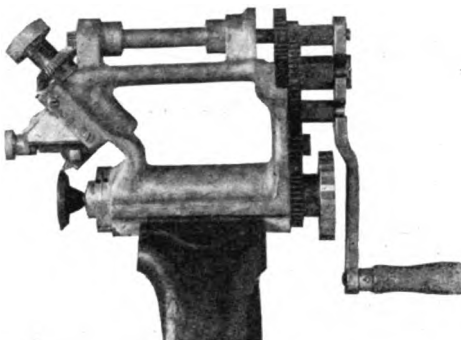
This instrument is a Hoyt type meter, 5"x4 1/4" wide. It is ruggedly built for severe battery service station work. There is a zero adjuster on top of the case and the scale is divided to read 0.3 of a volt to the left of the zero and 2.7 volts to the right. The finish of the case is black enamel and the base is polished mahogany. It is known as type 515-D. Price \$12. With cadmium prods, \$15.50.—Burton-Rogers Co., Boston, Mass.



Bailey Whirling Atomizer

BAILEY WHIRLING ATOMIZER

This device fits between the carburetor and the manifold and is easily attached. The whirling of the fan is caused by the suction of the engine. The three-bladed fan is reinforced by six arms, each arm being in a different plane. Price for Ford, Maxwell, Overland 4, and Chevrolet 490, \$3; other cars, \$5.—Asch & Co., Inc., 16 West Sixty-first Street, New York City.



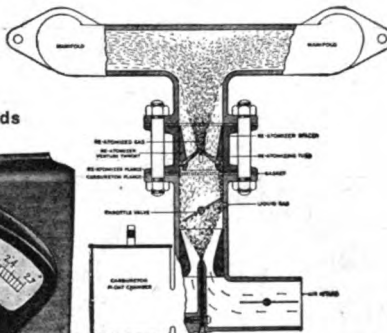
Payson Valve Facing Tool

PAYSON VALVE FACING TOOL

A special tool for facing valves. It takes any size up to 2 1/2 in., and one standard 5/16 in. collet is furnished with each machine. Other sizes of collets are furnished on order.—Payson Mfg. Co., Milan, Ill.

BALL & BALL RE-ATOMIZER

The re-atomizer comprises a spacer into which is pressed a venturi throat carrying four small tubes. The spacer contains a passageway of the same diameter as the intake manifold. Around the lower outside edge of the re-atomizer, there is a groove which forms a small circular chamber. The gasoline deposited on the walls of the carburetor is drawn up into the groove, and from here it is drawn through the four tubes and re-atomized. It is claimed that this device delivers a uniform mixture to the intake manifold.—Penberty Injector Co., Detroit.



Ball & Ball Re-atomizer



New Counter Display

NEW COUNTER DISPLAY

This display box contains nine different styles of Empress grease and oil cups. Five of these are oil cups and four are for grease, in assorted threads and sizes. The box is made from heavy cardboard, and is divided into fifteen sections, each of which is removable. Full descriptions together with prices on all cups in the box is given on the cover.—Bowen Products Corp., Auburn, N. Y.

Winter Business

Send in a Winter Business Idea—Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management directed toward getting winter business and winter profits. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever we shall be glad to shape it up for you.

Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

The Dealer's Own Car—How to Make It a Selling Force

OF course you drive the car you sell. That is good business. If it isn't good enough for you, it isn't good enough for the people you are trying to sell it to.

But are you getting out of the car you drive its total value as a producer of prospects and sales?

In an Eastern city there are two dealers whose methods of advertising are as different as success and failure. Both are handling popular priced cars and each drives a model for his own personal use. Beyond that there is no similarity. Not so long ago, two prosperous townsmen of these dealers stood at a corner waiting for a street car. Dealer Jones whizzed by.

"You would think he'd pick us up," one remarked.

"Yes," replied the other. "Especially when you are on the point of running that old car of yours into a salesroom and driving out a new one."

"That is just the point. Jones has seen me enough times in that old bus of mine to know that I am a good prospect for a new car, if he doesn't know it he should. He knows that I am in the position to buy anything he has to offer; and if he didn't know it, it would be an easy matter for him to find out. His idea seems to be for me to come around and hand him an order—he'll wait."

As Jones's townsmen stood there, dealer Smith breezed along in an attractive sedan. It was a stock job, but brilliantly polished and equipped with many of the little conveniences that make motoring comfortable. On it were tire

cover, runningboard mat, mirror on the front fender and one or two other things in the line of winter comforts, and which might be found attractively displayed in the dealer's accessory department.

"Jump in, boys."

They did. Smith may not have known that one of them was thinking of buying a new car, but he certainly was paving the way for a sale. It was good automobile business. Smith makes it a rule to give everybody who looks like a prospect a lift, but in this instance the men believed that they were being particularly favored. That was precisely what Smith wanted. It is only natural that when a man has taken the trouble to pull up to the curb and has asked you to jump in, to say "How fine the motor runs," or something else just as com-

These Slips Get Results

YES!
Tire Prices Have Taken a Fall!
Come See Us About the New Prices on
TIRES and TUBES
WE PUT 'EM ON YOU WEAR 'EM OFF
The Lamar Motor Sales Co.
RIGHT ON MAIN STREET
LAMAR, COLORADO

MOTOR ROBES
Make Winter Motoring a Pleasure
Call and see our line of
Motor Robes Steamer Rugs
Indian Blankets
All Sizes, Styles and Patterns
THE LAMAR MOTOR SALES CO.
RIGHT ON MAIN STREET
Lamar, Colorado

BUY YOUR AUTO SUPPLIES HERE
DIKE SAYS WEID CHAIN JACKS ARE HANDY
You May Not Need a New Auto Jack Today
But We Have 1000 & 1 Serviceable Auto Accessories
"RIGHT ON MAIN STREET"
(The Lamar Motor Sales Company)

Visit Our New
SERVICE STATION
Where You Get Service Worth While
And Service With A Smile
THE LAMAR MOTOR SALES CO.
"Right on Main Street"

WE HAVE A RADIATOR COVER
For This Car
THE LAMAR MOTOR SALES CO.
"Right on Main Street"
LAMAR, COLO.

WE HAVE A RADIATOR COVER

A small slip, 5 x 7 in., carrying attractive display advertising for the car, the service station, tires and winter accessories is being effectively used to get winter business by the Lamar Motor Sales Co., Lamar, Col. These slips are used as envelope stuffers and are put in the automobiles that are parked along the street. By having them printed four at a time on one sheet, 11 x 14 in., and then cutting them, the company gets 2000 slips for the price of 500, 11 x 14 in.

plimentary, and so it was with these men.

"Brand new?" one of the men asked. "New!" dealer Smith retorted. "Well, it looks new." The dealer was working up to the sales point nicely. "Look at this," Smith pointed to the speedometer. They read and learned that the machine had run 8000 miles. "That is proof that our car stands up."

"Yes," answered the one who was thinking about buying a new car, "but you have had it repainted, haven't you?" "Original paint, original battery, the same identical car that has climbed mountains, and splashed through the rain, yet you think it is new. That is the kind of a car our factory is turning out, it is built to last. Eight thousand miles is nothing for a car like this, and it will be giving as good service at 30,000." They had halted for traffic and Smith's mind was pre-occupied for a moment. This gave the passengers a chance to look over the interior of the machine.

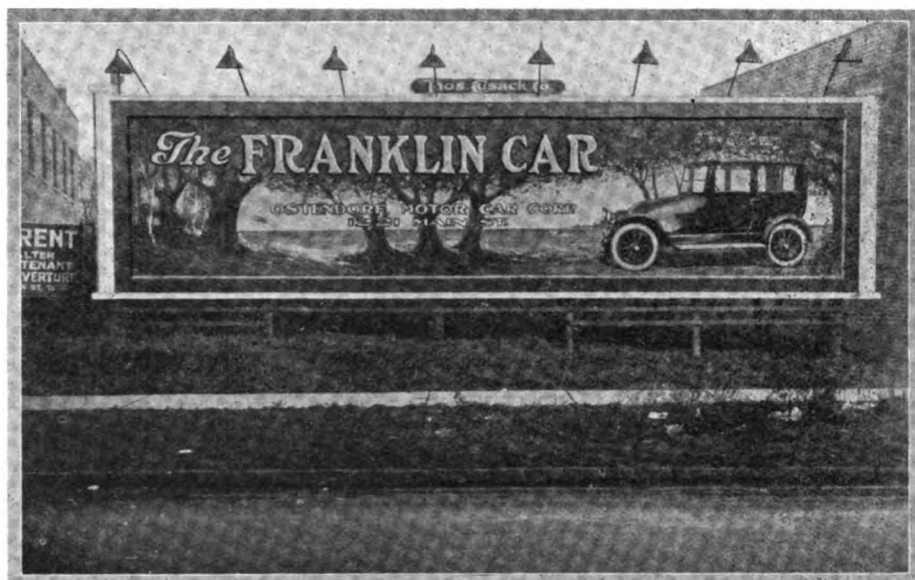
"What does it sell for?" asked the interested one.

"Thirty-two hundred and sixty-five dollars, delivered," was the reply. "Kindly note the word delivered, we quote you the price of the car delivered to the house, war tax, spare tires, tools and everything included, yes, and five gallons of gas. If you don't want our spare tire or the bumper we will leave it out. We do not want our customers to think that the car is going to cost \$2,895 and then discover that there are a lot of extras." His passengers considered it a good idea. The man who was thinking about buying did not say whether he considered the price too high or what he cared to spend. Smith was right in assuming that the price of the enclosed model was more than he wanted to pay. "Now, our open model," he added, "is \$2,280—delivered. Undoubtedly that is what you are looking for. That is, I am assuming that you are in the market."

"I am," one of the men replied. Having arrived at their place of business, the passengers realized that they had been discussing the car without once mentioning its name. They inquired. "I thought you knew," said Smith. "Everybody is talking about the 'Breeze.'"

In the few moments it took Smith to drive the car up to the curb the name Breeze was mentioned a dozen of times. One could not forget it. Smith had cleverly saved it till the last, knowing well that last impressions, like first impressions, are those that last. As they hurried up the steps, Smith made a note of the address. He already knew their names. The rest was easy.

Out of this ride there developed business. If nothing more, it developed advertising; for if those men told one man about the Breeze they told a dozen, a dozen people, therefore, learned that the Breeze was a good car. This publicity cost the dealer nothing. To reach a dozen people that squarely with the news that his car was a good car, and



Road Sign Gets Winter Sales

Believing that winter business might be stimulated by means of outdoor advertising signs, so big, so attractive and so advantageously placed as to be sure to receive the attention of passers-by, the Ostendorf Motor Car Corp. of Buffalo, distributor of the Franklin car, has erected, as an experiment, a huge sign at Main Street and Woodlawn Avenue, Buffalo. "We have been most agreeably surprised at the direct results of this venture," said George Ostendorf, president of the corporation. "Many persons have made it their business to stop in here and mention the sign. We are so well pleased with the business it is bringing us we have decided to erect other similar signs in different parts of the city."

particularly to make a lasting impression on those two men by any other means of advertising, it would have cost the dealer considerable time and expense.

Comparatively few dealers realize how conspicuous their own cars are. This is particularly true in the smaller towns, where the dealers are generally known.

In the city where this happened there was a general impression among motorists that the enamel on the hood of a certain make of car went dull very quickly. A dull hood often is an indication of an engine which chronically overheats. A dealer can argue with a prospect in an effort to convince him that the engine of the car he sells always runs cool, but if his cars about town have dull hoods, the prospect is not inclined to believe what he is told.

Where Appearance Deceives

The engine in the car referred to in this particular case does not over-heat. The few dull hoods about town were due entirely to the failure to apply polish. The folly of the situation is that the dealer's own car is one of those with a dull hood. He seldom cleans the car and apparently never polishes it. He refutes his own arguments. It is a detriment to him rather than publicity. His car being shabby gives a bad impression, and, therefore, it does not help him sell cars; if anything, it helps his competitors.

There are some dealers who have so much faith in the advertising value of their personal cars that they ride about with placards on them calling the

public's attention to the make of car, the price and the location of the sales-room. Some consider this cheap advertising and do not recommend it, because any advertising that is recognized at once as a plea to buy is worthless.

A dealer's car, perhaps, is the most conspicuous in his own neighborhood. The car stands in front of his house a good part of the time, so that all who pass see it. He is known as the local distributor of the car. With the neighborhood knowing him, isn't it logical that the dealer should consider his own car a standing advertisement? In addition to seeing that it is always spick and span he should be careful never to do any tinkering with it in view of the neighbors. Careful adjusting of valves, refilling of the battery, carburetor adjusting and such things should all be done in his own service station and not where people can see it and comment upon it.

The dealer should make his own car give the impression that it stands up take precedence over every other sales point. If the dealer's car always looks and runs better than the majority of cars in the neighborhood, that is an argument for its superiority, psychologically, at least, and psychology is a big factor in all selling efforts. The prospect who will listen to reason and appreciate the superiority of design and quality is rare in comparison with the great number who are swayed by impressions. The advertising possibilities of the dealer's own car are unlimited. The first class condition of the dealer's own car is the best evidence that the prospect will get his money's worth.

Ansted Engine and Increased Wheelbase Features of New Lexington Model

Series S Models to Be Continued Without Change

Specifications of the Lexington Series T

Bodies and Prices—

Touring car, \$2985

Sedanette, \$4150

Salon Sedan, \$4250

Engine—Ansted 6 cylinder.

Bore and Stroke— $3\frac{1}{4} \times 4\frac{1}{2}$ in.

Valves—Overhead.

Electrical System—Gray & Davis.

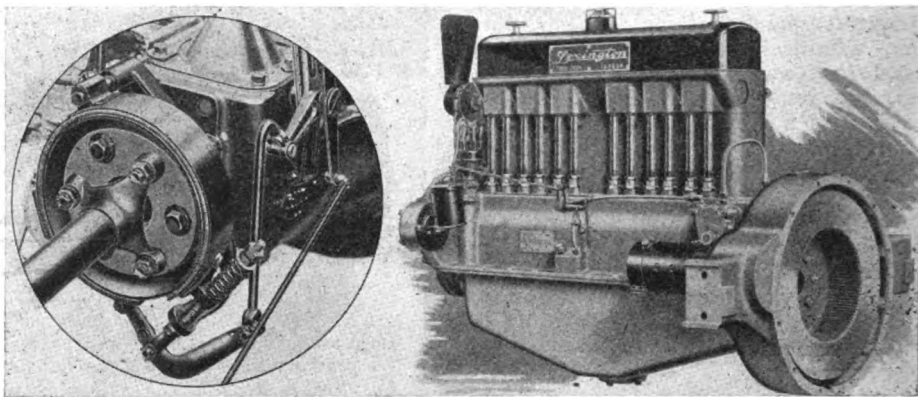
Ignition—Connecticut.

Carbureter—Rayfield.

Lubrication—Vacuum controlled.

Wheelbase—128 in.

Maker—Lexington Motor Co.,
Connersville, Ind.



At the left is shown the brake on the gearset and at the right is the new Ansted engine which is the feature of the new car

A NEW Lexington model to be known as the series T has been added to the line of cars made by the Lexington Motor Co. The outstanding feature of the new model is the use of the new Ansted engine which is made in Connersville. With the exception of this new engine which replaces the Continental engine previously used, and the increased wheelbase, the car does not differ radically from the previous chassis. All of the Series S cars will be continued.

The engine is of the overhead valve type and there are a number of features that are not very common in automobile design at the present time. The rocker arms which operate the valves are of the variable ratio type. That is, the valve

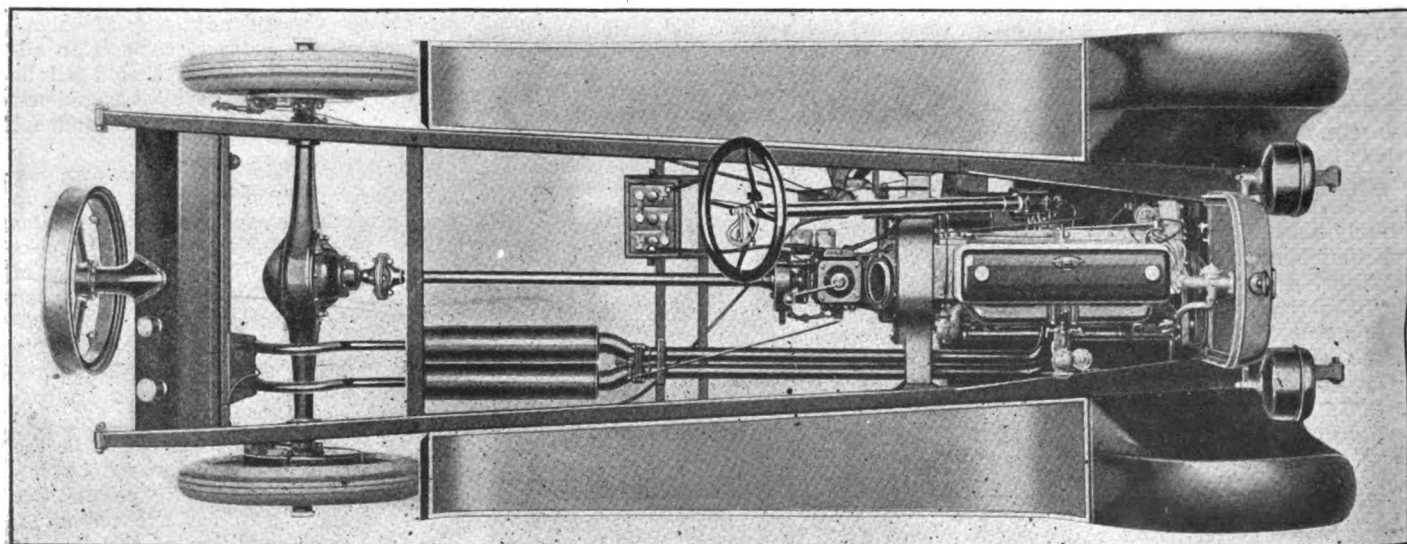
rocker arms are so mounted that they have varying fulcrum points and the rocker arm ratio is therefore varied from 1.265 to 3.047 to 1. The change in ratio permits the valve to open and close slowly and yet allows a greater lift than is otherwise possible. The cam design is worked out so that there is no valve clatter at high engine speeds and the use of double valve springs prevents the valves operating in synchronism with the rest of the mechanism. The entire valve mechanism, including the rocker arms, is entirely enclosed and the engine breather is located on top of the valve cover. The oil vapor coming up through the breather therefore lubricates the valve rockers.

Vacuum Lubrication Control

One of the features of the lubricating

system is the control of the oil pressure by vacuum. When there is a high vacuum in the intake manifold the throttle is probably closed or nearly so and the engine running light. At such a time maximum lubrication is not needed. The vacuum-operated piston that works the oil bypass valve is therefore raised against spring pressure and the oil is bypassed, then reducing the oil pressure to a minimum and preventing excessive oiling and smoking at low speeds under light load.

The thermostatic control of the cooling system differs from the conventional in that a Rayfield regulator is provided and this permits the circulation of the water in the radiator at all times instead of just circulating it around in the cylinder water jackets. The water is circulated



Top chassis view of the new Lexington Series T

by a new type of screw or turbo-impeller pump. The principle is such that it will pump a good head of water at low speeds and still not deliver an excessive amount at high speeds. It also is open so that thermal circulation would take place in the event that the pump drive should fail. The pump is located at the rear end of the engine and driven off the rear end of the electric generator by a small shaft with two fabric universal joints. The water is directed into the cylinder block by a distributor pipe that has three inlets to assure uniform distribution of water and cylinder temperature. A two-bladed cooling fan is furnished.

The use of only two timing gears and belt drives for the auxiliary apparatus is quite a departure from conventional practice. The fan, generator and water pump are driven by V link belts. There are two independent belt drives, one for the fan and the other for the generator. The fan is mounted upon an adjustable support so that the stretch in the belt may be taken up. The same effect is obtained by using a standard S. A. E. mounting for the electric generator whereby the generator can be swung through quite an arc. It is this movement of the generator that made it necessary to use two universal joints between it and the water pump. As both units

are driven from the crankshaft they act as a sort of vibration dampener.

Unit Powerplant

The new Ansted engine is combined with the gearset forming a unit power plant and has a new design of multiple disk clutch which is now being made by the Lexington company. It contains five driving disks and six driven ones. There are ten floating Raybestos moulded friction rings, located one between each of the disks which are made from saw steel. The Raybestos disks present double the wearing surfaces usually found in this style of clutch because they are floating. They just clear the driven clutch drum so that when the clutch is released they cannot drop into the teeth of the driving member.

The most marked change in the chassis is the lengthening of the frame to give 128 in. wheelbase in place of 120 in. The section of the side frame channel is now practically 9 in. in depth with 2 in. flanges, top and bottom. The running-boards are bolted to the bottom of the frame, thus giving additional lateral strength. A cross member is carried from the underside of the runningboards across the frame and prevents sag in the runningboards and greatly stiffens the frame.

Both the emergency and the service brakes are unusual in their construction. The hand brake operates upon a 2 x 8 in. drum located at the rear end of the gearset. The foot brake operates on two 16 in. drums, one attached to each rear wheel, and are external contracting bands 2 in. wide. The hand brake is operated through a spring tensioning device so that it is possible to bring the car to a stop with very light pressure. The foot brakes are operated by a cable guided to each rear wheel by a heavy tube that is attached to the frame. The cable passes over a pulley attached to the brake pedal, and the pressure on both brakes is thus equalized by the movement of this pulley. The brake cables pass through loops or guides on the axle tubes and therefore are not affected by the slightest notation of the axle when the brakes are applied. Fabric universal joints connect three speed selective gearbox with a rear axle.

A triangular instrument board located in the center of the cowl carries all the instruments, which consist of ammeter and oil pressure gage, speedometer, switches, etc.

The prices are as follows: Seven-passenger touring \$2,985; four-passenger Sedanette \$4,150; seven-passenger Salon Sedan \$4,250.

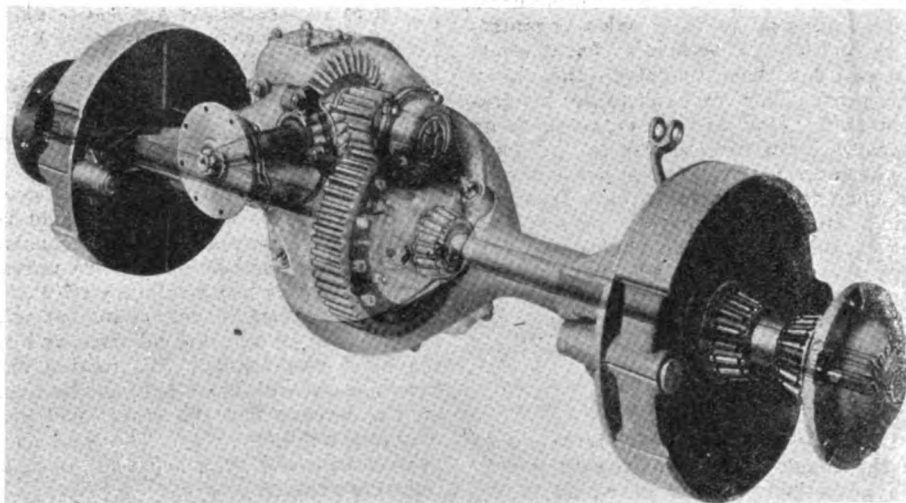
Dual Reduction Axle Replaces Worm Drive on Mack Trucks

DOUBLE reduction rear axles will be used on all Mack AB trucks which formerly used worm drive. This new axle employs nothing but toothed gears, four in number, the gear unit being one compact assembly located at the middle of the axle and driving through live axle shafts. It is of full floating construction, and is equipped with Timken roller bearings throughout.

The load is carried on a one-piece, drop-forged axle with a wide yoke at the center which encircles the gear unit. This single forging of chrome nickel steel embodies the entire axle beam, yoke, wheel spindles and spring seats. The driving portion of the axle is enclosed in a cast aluminum-alloy housing. The yoke of the axle forging is inclined at 45 deg. backward from the vertical so that it slants downward and forward, thus having its greatest strength in the plane in which the road shocks are transmitted. This also increases the clearance and shortens the driveshaft.

The differential occupies the same position as in bevel or worm-driven axles, and is driven by a ring gear, which is in turn driven by a small pinion. This spur pinion is integral with a short, transverse jackshaft on which is mounted a bevel gear which meshes with another bevel gear on the end of the driveshaft.

The new axle weighs about the same as the worm-drive axles. All bearing adjustments may be made without disturbing the assembly of the parts.



Phantom view of Mack dual reduction axle

Either differential, jackshaft or pinion-shaft may be removed without disturbing any other parts. The dual reduction axle is made with the following reduction ratios: 5.875 to 1, 7.6 to 1, 9.25 to 1 and 10.75 to 1. It is a comparatively simple job to change the gear ratio as it is only necessary to put in a new pinion-shaft and bevel gear.

The Hotchkiss drive will be continued in the new models. The new springs are 54 in. long and 3½ in. wide, carrying 1¼-in. self-lubricating bushings. They carry four rebound clips bolted through eyes on intermediate leaves. The braking system has also been changed, the foot brake acting internally on the rear wheels and the hand brake on the driveshaft at its center. This divides the lat-

ter into two parts, and four large universals are provided.

Both the double reduction and chain drive Mack AB trucks have a number of other improvements, such as a new engine crankcase having a 3-gal. oil capacity instead of 1½ as formerly. The engine, clutch and gearset form a single unit. A new gearset has been designed which has an extension countershaft with a keyed power take-off. A standard S. A. E. tire pump mounting is provided on the side of the case to receive a pump for the inflation of pneumatics.

Prices on the new models are as follows:

Capacity	Chain Drive	Dual Reduction
1½-ton	\$3000	\$3450
2-ton	3300	3750

New York Ready to Launch Shows

"BUSINESS AS USUAL" THEME OF BIG WEEK

Manufacturers Line Up Real Speakers for Meetings— Dinners to Be Unusual

NEW YORK, Jan. 3.—Every element of the automotive industry in New York is making ready for "show week" starting Jan. 8, and about all that remains to be done is to raise the curtain. There is every indication that more dealers and manufacturers will attend than ever before and they will be kept busy from morning until late at night. "Business as usual" will be the main theme of all the scores of meetings which have been arranged but it is realized that most of the men who are coming have been thinking of business so much of late that their heads ache and plenty of amusement will be provided for them for a change.

Dealers are coming to the convention in droves. Many of the manufacturers have intimated to their sales organizations, politely but pointedly, that it would be well for them to get to the shows this year. They can't fail to get inspiration from them and are expected to go home with the firm resolve to "get back to business." Everything possible will be done to put them in this frame of mind. One of the important factors leading to this end will be numerous meetings at which speakers who can hit from the shoulder will tell why there is nothing to worry about and how the public can be sold on the essentiality of automobiles.

Line Up Advertising Work

Dealer organizations in different parts of the country are preparing to join in the advertising campaign which is designed to convince everybody that automobiles are transportation and not luxuries. This movement is not confined to the largest cities. The Milwaukee Dealers' Association plans to spend \$10,000. The Topeka association has decided to do something and the dealers in New Haven intend to get in the procession.

New Yorkers always have been interested in passenger car shows and this year is no exception. They are going to do everything they can to make the visit of the automobile men pleasant, at the same time reaping a modest profit. Thanks to the efforts of the National Automobile Chamber of Commerce and the Motor and Accessory Manufacturers' Association, however, the hotel proprietors have taken off their pirate garb and agreed to keep rates at the usual levels. It was explained to the owners of the largest houses that there are hundreds of

Meetings and Banquets Scheduled for Week of New York Show

MONDAY, JAN. 10

10:00 am. and 2 pm.—Automotive Service Associations Convention, Hotel Commodore.
2:30 pm.—Rubber Assn. of America Annual Meeting, Yale Club.
7:00 pm.—Rubber Association of America Banquet, Waldorf-Astoria.

TUESDAY, JAN. 11

10:00 am.—N. A. C. C. Foreign Trade Committee Meeting, N. A. C. C.
10:00 am. and 2 pm.—Society of Automotive Engineers, Standards Committee Meeting, 29 West 39th St.
10:30 am.—N. A. C. C. Highways Committee Meeting, N. A. C. C. headquarters.
2:30 pm.—N. A. C. C. Motor Truck Committee Meeting, N. A. C. C. headquarters.
7:00 pm.—National Automobile Chamber of Commerce Banquet, Commodore.
8:00 pm.—Society of Automotive Engineers, Aeronautic Session, 29 West 39th St.

WEDNESDAY, JAN. 12

10:00 am.—N. A. C. C. Directors' Meeting, N. A. C. C. headquarters.
10:00 am.—Society of Automotive Engineers Meeting, 29 West 39th St.
2:00 pm.—Society of Automotive Engineers, Body Engineering, Aeronautic and Chassis Sessions, 29 West 39th St.
2:00 pm.—Motor and Accessory Mfrs. Assn. Annual Meeting, Commodore.
7:00 pm.—Motor and Accessory Mfrs. Assn. Banquet, Commodore.
9:00 pm.—Society of Automotive Engineers Carnival, Hotel Astor.

THURSDAY, JAN. 13

10:00 am.—Society of Automotive Engineers, Fuel Session, 29 West 39th St.
2:00 pm.—Society of Automotive Engineers, Fuel and Highway Sessions, 29 West 39th St.
7:00 pm.—Society of Automotive Engineers Banquet, Hotel Astor.

perfectly good hotels in perfectly good locations on side streets that would be glad to get patronage at reasonable prices if the big hostilities were unreasonable and this had a salutary effect.

Special automobile entertainment will be provided in all the cabarets and in the hotel restaurants. The motion picture houses will flash automobile films on the screens and the stores will display automobile togger. The New York dealers will hold open house all week in their club rooms.

The manufacturers will be just as busy as the dealers, for the "big four" associations will hold their annual meetings as well as all kinds of group sessions. There will be some kind of business meeting both interesting and profitable for every car, tire and parts maker and every engineer. The banquets starting Monday night will be a big entertainment feature.

Rubber Association Dinner First

The first feast will be that of the Rubber Association of America. There will be three speakers, including P. E. Blodin, postmaster general of Canada, and Congressman Fish of Ohio. The third has not been announced.

The N. A. C. C. will feast Tuesday night. There will be two speakers, one of them James Schermerhorn, editor of the Detroit News. It is practically certain the other will be one of the real

leaders of industrial life in America. There will be the usual stunts and a song leader who could put "pep" into a funeral.

The banquet of the M. A. M. A. promises to be a lively session. The only problem to be considered will be that of food and there will be no speakers but there will be SOME entertainment. It will be under the direction of the theatrical man famous for the production of musical shows with the most beautiful chorus girls. He has offered the services of his feature acts.

Accessory Meeting Wednesday

The annual meeting of the M. A. M. A. will be held Wednesday and in addition to the usual business there will be an innovation in the form of an open forum. This will be a general discussion of the association's activities. The speaker at the meeting will be George M. Graham, vice-president of the Pierce-Arrow Motor Car Co. No long, formal reports will be presented. To stimulate interest in the show "on to New York" committees have been formed in Detroit, Chicago, Cleveland, Buffalo, Akron and Indianapolis and they will compete for the honor of having the largest delegation present.

Details of the annual dinner and frolic of the S. A. E. on Thursday night have not been arranged but there will be several speakers and the banquet will be followed by a dance.

Officials Quit Ford Organization

COMPANY REPORTED SHAKEN BY STRIFE

Brownell and Turrell Resigned —Klingensmith Reticent— Report Heavy Surplus

DETROIT, Jan. 3.—Lack of harmony in the Ford organization, which developed a near rupture at the time of the sensational price cut, has resulted in the resignations of F. L. Klingensmith, executive vice-president and general manager of the Ford Motor Co., L. H. Turrell, chief auditor, and Charles A. Brownell, advertising manager.

Brownell is leaving ostensibly on account of the health of his wife, but to a representative of Motor World admitted yesterday the fact that Charles Sorensen, general manager of Henry Ford & Son and E. G. Liebold, private secretary to Henry Ford, practically were in control of the big institution.

Turrell, in a statement to-day, said he did not care to add anything to the statement of Brownell other than to admit that conditions had become such as to develop a combination of circumstances that compelled his resignation. Klingensmith denied that he had resigned and said he had not seen Henry Ford for a week. He added, however, that he would be able to make a statement following a meeting of Ford executives which was to be held to-day.

In spite of Klingensmith's statement that he had not resigned and had not seen Henry Ford for a week, an official of the company said Liebold had asked for Klingensmith's resignation. Klingensmith's further statement that he probably would have something to say after the conference is taken to mean that he will not tender his resignation at the request of Liebold or Sorensen and not until it is asked by Henry Ford.

Three Resignations Accepted

Liebold said there was nothing for him to say other than that he had been informed the three resignations had been accepted. He said no successors had been named to Klingensmith, Brownell or Turrell but added the entire matter would be threshed out and settled in detail this week.

The friction appears to have resulted chiefly from the fact that Henry Ford has maintained his office at the tractor plant at Dearborn to the exclusion of the big Highland Park establishment, where 51,000 of his employees work and as a result received his only information from the Highland Park plant through Sorensen and Liebold—neither of them in touch with Highland Park conditions.

It is known that there was bitter op-

Next Week's Motor World

- 1—The New York Show—detailed account of the exposition and accompanying meetings; descriptions and illustrations of new cars.
- 2—Illustrated report of the New York motor truck show.
- 3—The Dealer's Contract—Is lack of a contract that is worth anything the principal reason why bankers are reluctant to make loans to dealers? Are the manufacturers putting out a smoke screen? Read what a successful dealer says.

position to the price slashing from Klingensmith, on whom fell the burden of getting the money when it was needed. Klingensmith and other executives took the position that Ford sales would not be increased by the price cut and at the same time business for the other manufacturers practically would be killed thereby adding to public unrest and panicky conditions. Events bore out their prediction. For one week after the cut Ford sales jumped enormously but immediately thereafter slumped. Ford dealers throughout the country are overstocked and it is stated by an official there are 125,000 surplus cars on hand, approximately six weeks' output at the Ford schedule of 4000 a day.

Territory Changes Hurt

On the heels of the cut came the removal of territorial restrictions which put Ford dealers in a most antagonistic attitude and resulted in a chaotic condition in the dealer organization. At the same time the protective clause on prices was lifted, still further endangering the position of the dealers and adding to their already heavy burden. Under conditions as they exist to-day Ford can cut his price over night and the dealer with his warehouse and salesroom full of cars has no protection whatever. He must stand the loss whereas in the past the thirty-day clause in the dealer contract gave him full protection.

The slump that followed the price cut after the first week, in the opinion of Highland Park executives, made it imperative that the production be curtailed or stopped temporarily until the dealers could unload. Instead the order went forth to speed up. As a result October proved a record-breaker from a production standpoint, the company turning out 99,967 cars and trucks. The November output was 93,000 and the December total was 73,000.

(Continued on page 41)

TAKE BROADER VIEW, ADVISES TIRE HEAD

Automobile Men Lack Experience, Says J. N. Gunn—No Reason for Timidity

NEW YORK, Dec. 29.—A new automotive industry, of greater ability and greater usefulness, is going to be built in 1921, in the opinion of J. N. Gunn, president of the United States Tire Co., who addressed the Automobile Dealers' Association to-day at its weekly luncheon-conference. Gunn attributed some of the present timidity in automotive business circles to the fact that so many men in the business never had experience in any other business.

They fail, he said, to take into consideration all the factors that have to do with changing conditions and they get panicky when there is no reason for it. He said there was ample evidence of sufficient moral and business courage to carry the automobile business and all business through the present period of adjustment into "an era of the best prosperity the country ever had."

Gunn declared there must be recognition of the logical demand for lower prices, and said business had better stand slight losses for a time and keep going than suspend operations and sustain even heavier losses through the tax of overhead on idle investment.

Gunn, who was a business engineer before he entered the tire business, said the farmer always led the public back to buying after any "buyers' strike" and called attention that this is happening.

He urged automobile dealers to study, to make acquaintances among men in other businesses, and to take a broader view of business.

FRANKLIN PRODUCTION 10,500 DURING 1920

SYRACUSE, Dec. 31.—Franklin Automobile Co. has completed its biggest year and established several new records. Despite the almost complete let-down in selling during the autumn months, the Franklin company has sold and delivered 10,500 cars during the year. Of this number, 1000 have been delivered to customers for immediate use during the month of December. This is the largest December in the history of the company.

Figures for the entire output in 1920 were 9173 cars, of which number 828 were sold during December. In December, 1918, the Franklin company sold 234 cars. The production schedule of the preceding years never approached the figures of 1919 and 1920. The largest single day's delivery was 70 on Dec. 29.

UPS AND DOWNS MAKE 1920 IMPORTANT YEAR

More Healthy Normal Condition Expected by Coast Dealers in 1921

SAN FRANCISCO, Jan. 3—The year of 1920 has been one of the most eventful years in the history of the automotive industry the nation over, and San Francisco has proven no exception to the rule. Like every other great industry, it has gone through the process of transition from just-after-the-war superprosperity to a resumption of normal peace-time standards. The past year has included some of the biggest months the automobile business has ever known and a few of the quietest.

The New Year is looked forward to with a great deal of confidence by all leaders in local automotive circles. It many not contain the extremes of the past year, but it is expected by all concerned to be one of healthy and steadily improving financial conditions leading to general prosperity and an ever-increasing demand for passenger car and motor truck transportation.

A great deal of building has characterized the past year. Many are the new and handsome structures on Van Ness Avenue. Some are for establishments selling new cars, but the majority of buildings have been put up by firms long in business and feeling the need for expansion.

Many new cars have also been introduced to the San Francisco motoring public during the past year, in addition to a large number of distinct changes in old and established lines as embodied in new models.

TRUCK ASSOCIATIONS OPEN TRANSPORT SHOW

NEW YORK, Jan. 3—The Highway Transportation Show under the auspices of the Motor Truck Association of America, was officially opened to-day in the First Field Artillery and Twelfth Regiment Armories this city by Secretary of State Lyons of New York. Twenty-six makes of trucks were on exhibition, practically all of the available space in the two armories being taken. Throughout the show, which will continue until Jan. 8, demonstrations of the practicality of motor trucks for all sorts of work will be given. There was a large attendance at the opening session to-day and evidences were given that the show will result in a favorable impetus for sales.

Exide Batteries Reduced

PHILADELPHIA, Jan. 3—A general reduction of 28 per cent has been made by the Electric Storage Battery Co., this city, manufacturers of the Exide battery and electrical equipment. The reductions are effective immediately and apply to all sizes and descriptions of batteries made by the company.



Philadelphia's Poster

As usual Philadelphia offered a \$100 prize this year for a show poster design. It was won by Lloyd Nelson Grofe, of the School of Industrial Arts, Philadelphia. Grofe won last year also. His poster design, which will be used to promote the Twentieth Annual Show, to be held in Philadelphia, Jan. 15-22, is shown above.

CANADIAN DEALERS SEEK TAX REFUND

OTTAWA, Dec. 30—A deputation of motor car dealers some four hundred strong, coming from all points in Canada, from Vancouver to Halifax, waited on Sir Henry Drayton, Minister of Finance, to-day noon to urge that the excise tax paid on unsold cars in stock at the time of the recent repeal of the excise tax be refunded.

In the brief presented on their behalf by E. M. Trowern of Ottawa and supported by G. M. MacWilliam of Toronto and J. H. Fortier of Montreal, it was pointed out that in collecting the excise tax on motor cars at their Canadian source, the motor car dealers were discriminated against, as this procedure not only aggravated the already difficult credit situation but also militated against sales during the life of the excise or so-called luxury tax.

It was pointed out that owing to the buyers' strike and credit stringency, a large proportion of dealers would be compelled to face a loss beyond their power of absorption.

Rochester Business Good

ROCHESTER, Dec. 31—Business has been good, considering the winter months, during December, automobile dealers here report. One Ford dealer has sold on an average of one car a day, while a dealer selling a \$1,500 car reports eighteen sales for the month.

TWO PAPERS DRAWN FROM PUBLICITY BAN

Globe and Mail to Resume Former Policies—Bars Down for Show

NEW YORK, Dec. 30—Publishers of New York newspapers who banded together several months ago to curb automobile publicity are breaking away from this agreement and two of them already have filed declarations of independence. These papers are the Globe and Evening Mail.

Jason Rogers, publisher of the Globe, has informed his fellow publishers, that while he will stay with them on questions of publicity for other interests which are not entitled to it, publication of automobile news will be left hereafter to the discretion of his automobile editor, George Severin.

The Evening Mail will resume its former editorial support of the automobile business. John C. Wetmore, dean of newspaper automobile editors in this city, has mailed notices which say:

"I am pleased to announce that during and after the coming motor truck and passenger car shows in this city, Jan. 3 to 15, 1921, the Evening Mail will resume its long-time policy of publishing daily the latest and fullest news of the automobile industry and sport. The resumption of this policy will enable the Evening Mail to continue and emphasize its unrestricted support of the motor car trade, which has been a conspicuous feature of the paper in its daily automobile column, conducted for 16 years by me as the successor of men of such prominence in the sport and industry as Malcolm Ford, Alfred Reeves and A. G. Batchelder, its former editors."

The publishing association announced some time ago that the bars on publicity would be down for automobile week and many of them will publish daily stories next week in regard to the automobile industry.

DETROIT COMPANIES CUT GARAGE WAGES

DETROIT, Dec. 30—Automobile dealers in Detroit in nearly all instances have reduced wages in the garage from 15 to 25 per cent. Fear that a cut would prompt an exodus of employees has been dissipated and inquiry among many of the dealers elicited the information that not a man had failed to report after they had been informed that a new wage scale would go into effect on a certain day.

While everyone seems satisfied, not one of the dealers will assume the responsibility of having been the originator of the movement to reduce garage, and service station wages. A. Zeckendorf of the Siegel-Zeckendorf Co., Coy O. Simons of Simons Sales Co., and Williams & Hastings, Hupp distributors, were among the first to announce cuts and the rest rapidly fell into line.

A. E. F. TIRE SURPLUS SALE PLANNED HERE

Manufacturers to Withdraw Adjustment Privileges—Jobber Syndicate Move Studied

NEW YORK, Jan. 30—The sale of large quantities of deteriorated A. E. F. tires and tires made for the French military forces, known to have been made in France to representatives of a syndicate of New York and Chicago jobbers who plan to sell them here, has aroused American manufacturers to action designed to prevent their being sold as first-class merchandise.

The number of tires involved is now being investigated by the Rubber Association. They are said to comprise both pneumatics and solids, apparently new, and bearing the serial numbers of five American tire makers. None were manufactured less than two years ago and many are believed to be considerably older.

Through deterioration of material because of age and general exposure the manufacturers will withdraw all adjustment privileges from these goods. Though the serial numbers have been kept and adjustments will be denied on these the manufacturers seek to prevent imposition on the public by compelling the sale to be made with all the facts known.

Purchases of the tires are being made through French brokers who have taken over the sale for the Government. Prices for which they are obtained are said to be very low and this too is being investigated. Arrangements have been made for immediate shipment to the United States and a consignment of 2500 already has been landed.

No stipulations were made in the sale of A. E. F. material to the French Government that the supplies could not be offered for sale in the American market. Thousands of American cars were included in the supplies turned over but no reports have been received of the disposition of the cars.

To Keep Tabs on Bills

NEW YORK, Dec. 30—The Motor Vehicle Conference Committee has made plans to collect prompt, complete and accurate information regarding the introduction and progress of motor vehicle bills in both the Federal and State Legislatures which will hold sessions next year.

In addition the conference committee is completing the organization of subcommittees in each of the 48 states. Facts and arguments will be laid before the state legislatures to guide them in the enacting of motor vehicle legislation based upon scientific and equitable principles. It is expected that more than 1,000 motor vehicle bills will be introduced in the forty-two state legislatures which will hold regular sessions beginning next month.

1000 MILES OF TRAVEL GIVEN WITH USED CARS

MILWAUKEE, Dec. 31—As a special inducement to buyers at its exchanged-car sale, the Hamper-Albertson Co., distributor of the Liberty Six, advertises: "As a special feature we are including with every car sold during this sale 1000 miles of driving in the form of 75 gallons of gas free." The offer is unique in the annals of used car merchandising in Milwaukee, and the Hamper-Albertson Co. says it has brought enough results to justify it in every way.

AKRON SHOW ATTRACTS INTEREST OF PUBLIC

AKRON, Dec. 31—Exhibits of cars and accessories at the annual automobile show which opened here Christmas night in the auditorium of the Central Garage represent a total valuation of more than \$1,000,000. The latest ideas in coloring and lighting effects have been adopted and the interest manifested in the exhibit by the public augurs well for the 1921 season, in the opinion of the exhibitors. The show will close Jan. 2.

To Issue Garage Paper

PHILADELPHIA, Dec. 31—The Philadelphia Garage Association, Inc., which has been holding its meetings during the year at the rooms of the Philadelphia Automobile Trade Association, has transferred its headquarters. The association will issue the initial number of its monthly magazine early in January. Richard F. Lusse is editor. A legislative committee is to be appointed.

\$15,047,653 DEFICIT SHOWN BY GOODYEAR

Refinancing Plans Are Deferred by Directors—Find Bank Terms Exacting

AKRON, Dec. 30—A deficit of \$15,047,653 was shown in the annual report of the Goodyear Tire & Rubber Co. for the fiscal year ending Dec. 31, presented at the directors meeting here. This does not include anticipated losses of \$19,000,000 on contractual obligations for rubber and fabric. The statement shows the sum of \$3,568,445 due the company from President F. A. Seiberling. This account has been closed by the company taking over the Goodyear athletic field and 30 acres of land owned by the East Akron Land Co., and one-half ownership of the Akron, Canton & Youngstown Railway through the deposit by Seiberling of 250 shares of common stock and 75,000 shares of capital stock as collateral.

Bills payable under liabilities include \$13,439,423 due on bank loans and \$5,995,500 due to brokers. The statement also shows \$736,095 due on subscriptions for stock issued to F. A. and C. W. Seiberling.

The directors denied that it was decided to-day to pass the preferred dividend, but it is considered a matter of course that it will be. The adjourned stockholders meeting called for to-day was adjourned again for two weeks.

It has been learned in the last few days that the company considers the terms of the syndicate of Eastern bankers too exacting and that efforts will be made to raise \$50,000,000 without mortgaging the plant or giving control of a majority of the stock. It is understood an ineffectual attempt has been made to interest J. P. Morgan & Co.

Selden Salesmen at Factory Conference



Salesmen were called from "the line" recently by the Selden Motor Truck Corp. in an advisory capacity. This picture shows some of them gathered at the factory to participate in the deliberations of the Advisory Council

SAME OLD DEALERS BUT METHODS CHANGE

Cleveland Automobile Row to Go and Get Them — Worry Not Noticeable

CLEVELAND, Dec. 30—The New Year will find that about the same set of men who occupied Automobile Dealers Row in this city at the advent of the year 1920 are still on the job—only the policies of the men have changed considerably.

A year ago the average Cleveland dealer was taking things rather easy, selling more cars than he did when he worked hard in the old days, and wondering just when "the easy come" season was to end. The "easy come" season ended about six months ago. The Cleveland dealer is not waxing so fat as he was a year ago, but—he's got a heap more fight in him than he had with the advent of 1920.

A canvass of the dealers brought forth the consensus that the dealer is far better off with the advent of 1921 than he was, with all his easy sales and big money, when 1920 made its bow. A year ago he was uncertain about the future, despite the then big earnings. Now he is certain that times are going to be better in the next twelve months than they have been in the last six.

The Cleveland dealer is preparing to fight hard for sales. He's jacking up his salesmen—telling them that a man has to hustle again to dispose of cars. This condition is reflected in the preparations for the annual automobile show, which is to be held in the Wigmore Auditorium, Jan. 22-29.

The dealer feels that competition is going to be stronger. He's putting more time into getting his exhibits in shape than he did a year ago. He's making a larger exhibit, for he wants the public to see everything that he has in stock. He's drilling his salesmen on how to improve service during the show.

Show Space at a Premium

As a result, the 1921 show will far eclipse that of a year ago. Secretary Caley of the dealers and manufacturers organization, which will give the exhibit, contracted for several thousand more square feet for exhibition purposes than they had a year ago, and even the enlarged area is far too small to accommodate all applicants for space. The accessories division also was enlarged, and the competition for space indicated more of the fight spirit that is to stimulate automobile trade.

F. E. Stuyvesant, vice-president of the Cleveland dealers organization, declared that he felt his firm was better off than it was a year ago, despite the rather hard pull of the last six months. He asserted that he expected to sell cars in 1921, because he and his men were going to put on more steam than they did in 1919 and 1920.

W. K. Wadsworth, president of the

Commercial Car Dealers Association, asserted that he wasn't the least bit worried about prospects for the new year. "We have had many inquiries for our lines of trucks and cars, and sales have been good." He expressed his conviction that the present condition was just what was needed to bring the trade back to its senses.

Warner M. Bateman, who distributes the Reo, asserted that he had to hustle right along to sell his cars, and that he was thankful now he had to. He recently moved into a new four-story building and is occupying every floor. After giving up rather an unpretentious store-room for the larger quarters, he finds that he has to hustle more to make things go, and he says sales the past month, coupled with prospects in his card index system, combine to make him optimistic for the future.

The Euclid Motor Co., distributor of the Velie, asserted it is not going to get the blues until the passenger and commercial car ceases to be a necessity.

TRANSPORTATION COURSE ENDOWED BY FRANKLIN

SYRACUSE, N. Y., Dec. 30—Recognizing the importance of highway building problems caused by the tremendous increase in motor transportation, Syracuse University has created in the college business administration, a Department of Transportation in which much attention is being paid to motor transportation. This department has been endowed by H. H. Franklin, president of the H. H. Franklin Mfg. Co.

The course is being conducted by Dr. Charles L. Raper, Professor of Transportation. He is developing the course from the broadest business point of view as well as along the lines of government aid and regulation. Problems of maintenance and depreciation, loading and speed, competition of the motor car and the horse-drawn vehicle, the street car and the steam railway are considered. Another phase taken up is the relation of the motor car to the building and maintenance of streets and highways.

The course has been worked out along practical lines. The student must know how to operate and care for a car before he is permitted to take the course. He must make a careful study of some practical problem of motor transportation in his own county. Several such studies of motor car problems now are being made in New York cities and rural communities. Similar problems in other States also are being considered.

Baker Receiver Named

NEWCASTLE, IND., Dec. 30—The W. T. Baker Automobile Co., operating salesrooms at Newcastle, Anderson, Alexandria and Marion has gone into the hands of a receiver. The Anderson Trust Co. of Anderson, Ind., was appointed receiver. The Baker company was one of the largest and best known retail automobile firms in the state.

SPRING SALES START IN PORTLAND FIELD

Early Winter Buying Better Than Pre-War Days — Ready for Big Show

PORTLAND, ORE., Dec. 31—These are not exactly flush days for the automobile trade in this territory, yet there are a good many encouraging signs both for the present and future. Few cars are being sold for immediate delivery, and the used car market is very dull. In this respect there has been little if any improvement since the election. But on the other hand, there is quite a trend toward ordering cars for future delivery, either in the spring or summer.

This tendency on the part of buyers has become noticeable enough to occasion quite a little talk. While dealers in their present over-stocked condition would much prefer, of course, to sell cars outright and deliver them, the shrewd business men among them see unmistakable signs in this movement of the long-predicted coming business revival in the spring.

Even so, November and December in normal times always have been slow months in the automobile business here. It has been so long since what can be called "normal times"—dating back to before the war—have prevailed in the industry, however, that dealers who have entered business since have nothing with which to compare present conditions.

But one of the pioneer automobile distributors in Portland, discussing the situation the other day, harked back to before the war and declared that business right now is 50 to 100 per cent better than normal, as compared to then.

"The trouble with a good many dealers," he said, "is that they find difficulty in realizing that we have simply returned to a period when we must sell automobiles instead of waiting for people to come in and buy them faster than we can fill orders. That has been the case for the past several years, almost from the time the European war began. Times in this period, which has just closed, were abnormal. We had no right to expect that they would continue.

Two Months Always Bad

"November and December always have been the worst months in the year for selling automobiles in this territory. Recently I went back to what I call 'normal' times before the war. I found that, regarded from that basis, we now are doing a 50 to 100 per cent better business than we did then."

The Automobile Dealers Association of Portland is in the midst of preparations for its twelfth annual show, which is to be held in the Municipal Auditorium from Jan. 10 to 15. They have voted \$5,000 as a decorations fund and, while the show will not be as large as that of last year, they expect it to be even more attractive and just as productive of buying interest.

INSURANCE CHANGES MAKE SALES 'TOUGHER'

Limitations on Policies Create Unrest—Cut Down on Fire and Theft Risks

MILWAUKEE, Dec. 31—Two phases of insurance protection as it affects the automobile business are receiving attention among Milwaukee manufacturers of parts and accessories, State representatives and retail dealers. The subjects are of chief concern to the credit and financial men of these businesses. Laxity regarding insurance during the "big days" in the business in 1920 and 1919, are said to be basically responsible for certain pressure now resting on the credit men.

Anxiety on the part of insurance companies, and pressure exerted by them upon their local agents, as to the kinds and amounts of risks, are seriously hampering sales of cars, new and used, under conditions which are described by automobile men as being "already too tough."

With the installation on Jan. 1 of a merit system of rating cars for insurance purposes, still further "rocks are strewn into the paths of the automobile salesman," according to dealers and State agents.

Some agents are refusing to insure cars for more than 80 per cent of their list prices, and these and other phases of insurance work at this time are all said to be disconcerting to purchasers and salesmen, and a marked hindrance in the endeavors to bring sales back to normal.

Fire and theft policies under the new Western rating system show a decrease of about 16 per cent in rates, except in large cities. Mutual and reciprocal competition is said to be furthering still more reductions at an early date.

Continue Appliance Credits

The new system provides for a uniform fire schedule for all localities. The theft rate varies with the locality, according to the extent of thefts in the past. Rates will vary according to the age of the car, fire rates increasing and theft decreasing with age. The 15 per cent lock and fire extinguisher credits are still allowed. An enclosed car with a lock will enjoy the locking device credit. The most marked part of the change is in making a distinction between country and city cars.

On the other side, the credit and financial men of Milwaukee automobile interests are about to assist in launching an educational campaign among dealers and "consumers," the need for this being shown since the price recession and general change in the business situation. According to the Milwaukee Credit Men Association officials, a general meeting will be held at an early date to launch such a campaign, designed to teach dealers and the public the necessity of having insurance contracts strictly applicable to the condition

of the risk, adequate insurance, dealing with strictly responsible companies, familiarizing with co-insurance and other special clauses and fire prevention.

A recognition is sought of the fact that "the fire insurance carried is the final collateral behind a merchandise risk of any kind."

Tire dealers are particularly interested in the campaign, in view of many recent experiences in which cars were destroyed, running on tires which had not been paid for. In the end, the insurance did not prove sufficient in a number of instances to cover the loss of the tires, so far as the dealer was concerned.

ARMY TRUCK DUMPING MAY REQUIRE NEW LAW

WASHINGTON, Dec. 30—Inquiries at the War Department relative to the proposal of Representative Anthony of Kansas to dump on the market many thousands of motor vehicles now owned by the Army discloses that 34,000 trucks now are owned by the transportation division. Approximately 10,000 of this number are not serviceable. They are used in motor transport schools and to supply parts. Under the present law if the Army has a surplus of motor equipment, it must be transferred to other departments of the Government. It is believed the law must be amended or a new legislation enacted to permit the proposed dump. The War Department contends that it needs all the motor vehicle equipment now on hand. If there is an actual surplus, the Post Office Department and the Bureau of Public Roads would be glad to absorb it, although Anthony contends these departments of the Government have all the equipment they need.

It will be possible for the committee on appropriation in the House of which Anthony is a member, to create a surplus by cutting down appropriations for military establishments and reducing funds for the transportation section formerly known as the Motor Transport Corps.

Delaware Adopts Lights

WILMINGTON, DEL., Dec. 30—With a view to making the highways of Delaware safer than they have been, Charles M. Upham of Dover, chief engineer of the State Highway Department, has arranged to place signal lamps at important intersections and other points. There will be red, yellow and green lights, red meaning first-degree danger, for use at railroad crossings, dead ends of roads, bridges, etc., yellow, second degree danger, for curves and grades, and green, for intersections.

Labor Nears Pre-war Status

HARRISBURG, PA., Dec. 30—Reports to the central office of the Pennsylvania State Employment Bureau are said by the officials to indicate that labor of all kinds is rapidly returning to its pre-war status and the Pennsylvania labor turnover is decreasing. It is believed conditions will be back to normal in virtually all trades in January.

KING PRODUCTION TO RESUME IN MONTH

Adequate Working Capital Assured by New Owners Will Make No Changes

DETROIT, Dec. 30—Charles A. Finnegan, head of the Buffalo syndicate which purchased the assets of the King Motor Car Co., announces that adequate working capital will be provided to develop the business. A long term lease has been taken on a new factory building recently completed by the Swedish Crucible Steel Co., and manufacturing activities will be concentrated under one roof instead of in three separate buildings, as heretofore. Production will start in February.

The King Motor Car Co. will continue to manufacture its own motors and transmissions and will do its own painting and trimming. Production will be continued on the two, four and seven-passenger touring models as well as the six passenger enclosed car. No change will be made in the name of the products nor in the prices. Preparations are being made to extend the facilities of the service department so that King owners will be insured prompt and reasonable parts replacement service.

S. J. Feldman of New York has been placed in charge of Eastern and export business. H. C. Bradfield, who was advertising manager of the company for several years, will continue.

Finnegan now is operating six automobile plants in different parts of the country, including the Giant Truck Corp., formerly owned by the Chicago Pneumatic Tool Co., and the part order business of the E. R. Thomas Motor Car Co.

Motorists Oppose Blue Laws

PITTSFIELD, MASS., Dec. 30—Directors of the Berkshire Automobile Club have formally voted themselves on record as opposed to any so-called "blue laws" which would prevent motoring and sale of gasoline and motor equipment on Sunday. They have also gone on record as opposed to a bill for the increase of registration fees for automobiles and against a bill requiring an automobile owner to furnish a \$2,000 bond. The club has instructed its secretary to write to the State Highway Department and ask why a branch of the registration service has not been opened in Pittsfield.

Weber Adds New Dealers

ST. LOUIS, Dec. 31—The Weber Motor Car Co. has introduced the multi-dealer system in St. Louis and East St. Louis for the sale of Studebaker cars. Edward Weber, president of the company, has appointed as Studebaker dealers the Park Automobile Co., of which Sam S. Primm is president and the Automobile Sales and Service Co., which is headed by Jack Bledsoe.

NORMAL, LOW POINT IN FLORIDA SALES

State Association Lays Plans for Intensified Selling Effort —New Officers Chosen

TAMPA, Dec. 30—That normal will be the lowest point business will reach in Florida for the next ninety days, was the opinion crystallized at the First Annual Convention of the Florida Automobile Dealers' Association, held in Tampa, Dec. 16, 17 and 18. More than 100 delegates were present representing all sections of the State.

The return of business to a buyers' market has brought no fear with it for these dealers. They feel merely that the situation calls for intensified selling effort, and that is how they are planning to meet it.

The exceptional growth of the Association's influence for better business methods was revealed in the reports read by Secretary L. K. Dickie, who traced the growth of the organization from seventy-two members with locals only in Jacksonville and Tampa to its present stature, with nine affiliated locals and nearly 200 individual members.

High spots in the meeting were the addresses of Dr. L. A. Bize, who branded the present business conditions as the outcome of depressive propaganda spread broadcast through the country in an effort to keep people from buying rather than any actual shrinkage of business or purchasing power.

Percy E. Chamberlain of Denver, who is touring the country for the National Automobile Dealers Association, delivered another of his impressive talks on "The Relation of Service to Sales."

Ray B. Cralle of Tampa was elected president. Other officers elected were Earl C. Williamson, Jacksonville, vice-presidents, C. C. Kirby and Scriven Bond, Jacksonville; L. B. Giles and G. M. Baughman, Tampa; Philip G. Murphy, Ostala; J. P. S. Houston, Tallahassee; J. E. Junkins, Miami; I. W. Phillips, Orlando; L. T. Bryan, Sanford; J. Y. Clark, Leesburg; V. S. Getts, St. Petersburg, and J. B. Darby, Palacka, directors by districts. Claude Nolan, retiring president, and W. A. Riddle, Miami, were elected directors at large. Jacksonville was selected for the 1921 meeting.

Saxon To Show Lubricator

DETROIT, Dec. 30—The Saxon Motor Car Co., of this city, have closed a contract with Roberts & Monroe, Inc., of Bridgeport, Conn., for the exclusive use of the Romon automatic chassis lubricator for one year. The Saxon show cars will be equipped with this apparatus, which is a centralized lubricating tank taking care of the bearings at all points of the chassis. The installation of this device and its exclusive employment on the Saxon chassis will be featured by this concern at its New York and Chicago exhibits.

TELL FIVE A DAY— SHORTAGE LIKELY

ST. LOUIS, Dec. 30—The Newell Motor Car Co. of St. Louis, has sent a letter to every automobile dealer in the St. Louis district, no matter what line of cars he handles, urging that his salesmen who meet the public be instructed to say to five persons each day for ten days: "It seems there will be a car shortage in the spring because factory production is being curtailed during the winter months. Many manufacturers have guaranteed their prices to July 1, 1921. If I were thinking of buying I would select my car now."

The company also invited the dealers to send in names of persons to whom letters stating the facts regarding the present status of the automobile business might be sent and inclosed postage to expedite returns.

The letter to dealers says: "If two men in your company communicate the message we suggest we will have reached 250,000 men without figuring those to whom the 250,000 will talk about it. If you and your competitor both tell the same story and it is discussed by the same people it will have its effect and you will get your share of the resulting business."

CHAMBERLAIN RESIGNS FROM HALL-CADILLAC

DENVER, Jan. 5—P. E. Chamberlain, who is home for the holidays following a tour of the East and South, during which he addressed automotive meetings in most of the principal cities on "Selling Service Intelligently and Its Relation to Sales" under the auspices of the National Automobile Dealers' Association, states that he has severed his connection with the R. R. Hall Cadillac Co. of this city, of which he has been general manager for several years. He left for the East this week.

Chamberlain addressed a meeting of automotive men in Omaha to-day. Asked about his future plans, Chamberlain stated that he is considering several propositions which have been presented to him during his tour of the country, but that he does not expect to decide upon any of them until after the Chicago show.

It has been understood here for some time that Chamberlain would not return to Denver permanently, but the fact has not been generally known throughout the trade nationally.

Prest-O-Lite Cuts Price

INDIANAPOLIS, Dec. 31—A reduction of 20 per cent in the consumer price of batteries has been made by the Prest-O-Lite Co., Inc., following a reorganization of its factory upon a pre-war basis.

WEST VIRGINIANS FORM ASSOCIATION

J. W. Reitz, of Elkins, First President of State Organi- zation—Consider Laws

PARKERSBURG, W. VA., Dec. 31—The West Virginia Automobile Dealers' Association was organized at a meeting here of dealers from all parts of the State. The session lasted one day winding up with a dinner at the Chancellor Hotel when the visitors were guests of Parkersburg Motor Car Dealers' Association, which has just been organized in this city.

The meeting was held at the call of J. W. Reitz, of Elkins. During the meeting there was a general discussion of the additional taxes proposed by the Federal and State Governments on gasoline, automobile trucks and other proposed measures affecting the business. It was decided to make a concerted effort to the State Legislature and Congress to forestall the proposed action.

The question of license plates came up and it was decided to recommend to the State Road Commission a single plate instead of two, as now, thus saving the State considerable expense.

The organization was perfected with J. W. Reitz of Elkins as president, Carl Beatty of Fairmont, Clarence Martin of Grafton, Jesse Wade of Clarksburg, Bruce Perry of Huntington, T. H. Lilly of Hinton, and Logan Fill of Welch, vice-presidents; George M. Ford of Wheeling, secretary. A board of directors was selected composed of R. C. Helmick of Clarksburg, C. M. Middelburg of Charleston, W. L. Smith of Wheeling, Dudley Shields of Parkersburg, and J. H. Coleman of Wheeling. The legislative committee is composed of Harvey Marsh, C. H. Middelburg and Bruce Perry.

The next meeting of the association will be held in Clarksburg in March, the date to be selected by the president.

The Parkersburg Motor Car Dealers' Association was organized two days before by the election of Harvey Marsh, president; William Kennedy, secretary.

To Show Electric Vehicles

NEW YORK, Dec. 30—Arrangements for an unusual electric automobile display to be held this winter are being made by the New York Edison Co. The big showroom of the company has been set aside for the purpose, and manufacturers of electric trucks, industrial trucks, passenger cars, and batteries and accessories have been invited to exhibit their products.

Street trucks and passenger cars will be shown during the week of Jan. 29-Feb. 5, while industrial trucks will hold forth during the following week. Batteries and accessories will be on display during the two weeks.

The show will be given under the auspices of the New York Edison Co., Charles R. Skinner, Jr., of the automobile bureau, being in charge.

OFFICIALS RESIGN FORD ORGANIZATION

Parts Makers Advised of Continued Closing Wednesday — Changes Cause Much Comment
(Continued from page 35)

In the face of this enormous production and the fact that dealers already were heavily overstocked came the official announcement that the company would shut down Dec. 24 to reopen again Jan. 3. Orders to parts makers who had been closed were to get into production Monday, Dec. 27, to prepare for the opening of the Ford plant.

Meanwhile the question of finances began to loom for the reason that there were unpaid dealer drafts amounting to \$12,000,000 outstanding and it is said Klingensmith, whose chief duties lay in the financial end, then took the position that resumption of operations would be unwise until the big surplus of cars had been unloaded.

A long conference last Wednesday resulted in orders to parts manufacturers who had resumed operations Monday again to stop production for Ford indefinitely and some of them, notably the Hayes Wheel Co., at Albion, which makes Ford hubs exclusively, promptly closed down after three days' operation following a shutdown of six weeks. At the same time orders went forth that the factory would remain closed indefinitely—certainly until Feb. 1. Officials said to-day there would be no resumption before Feb. 15. In any event and most likely the shutdown would continue some time after that date.

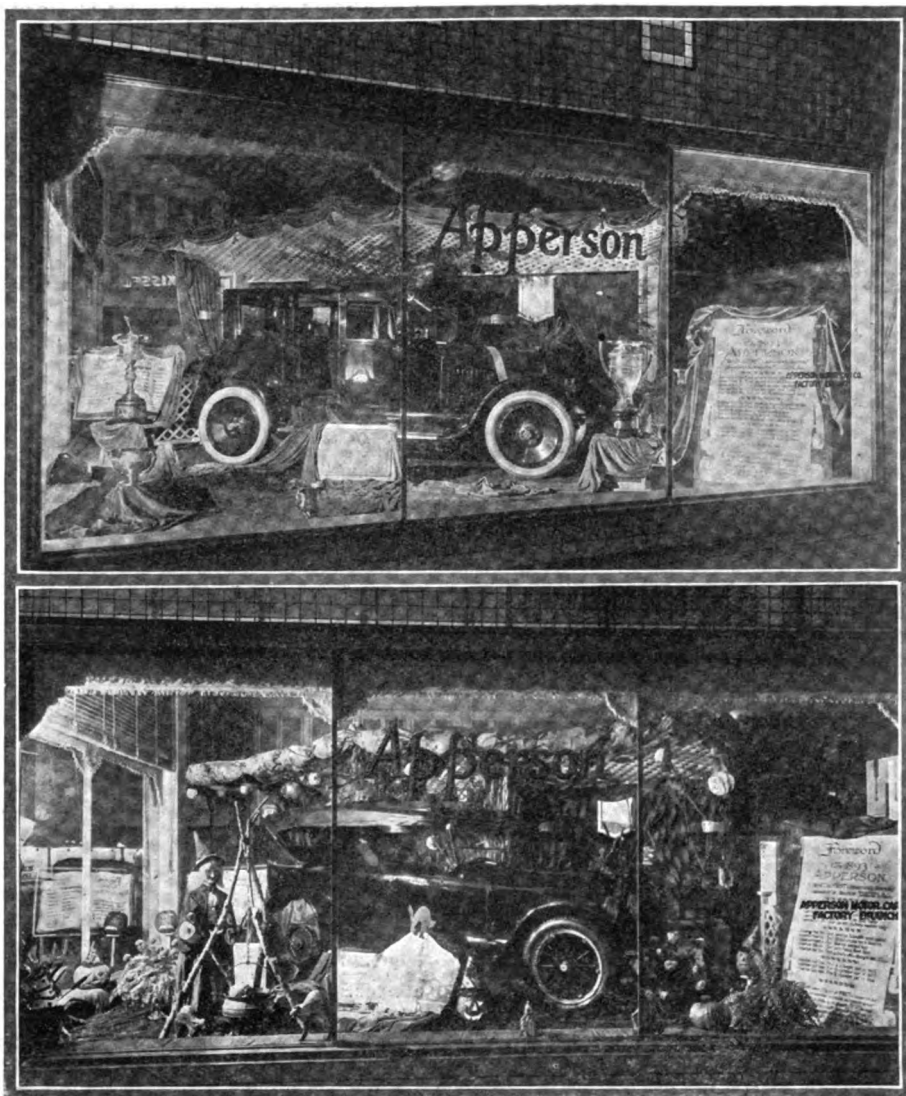
Just what action took place with regard to the resignations at the conference Wednesday is not known. It was followed, however, by an all-day session Thursday, and Friday morning Brownell announced his resignation. He later gave out the statement regarding Klingensmith and Turrell together with the facts which brought about the crisis.

Brownell has been with the Ford company since 1914 prior to which time he had handled Ford copy in the firm of J. Walter Thompson Co. When he joined the organization the company was building 38,000 cars a year. The output for 1920 was 1,023,552. Brownell had been contemplating a trip to California for the health of his wife though his plans were simply to take her to Los Angeles where he owns an estate upon which his daughter resides and leave her there for a time, returning to his duties in Detroit.

Men Regarded As Fixtures

Turrell, formerly an expert accountant has been with the Ford company nine years and as the head of the accounting department had actual charge of Ford finances incoming and outgoing. He was regarded as one of the Ford fixtures.

The resignation of Klingensmith, however, was the one big topic in banking circles and among automotive executives.



Effective Window Displays

A series of window displays that are unique and attractive has been inaugurated by the Los Angeles branch of the Apperson Brothers Automobile Co. The value of the features lies to some extent in the excellent window spread but more to the painstaking efforts that they represent. The windows are timed as near as possible to current events. The first denoted the arrival of the period when enclosed cars are most in vogue and the Apperson sedanette was put on display. A beautiful, rich background of hangings was enlivened with ferns and potted foliage plants. A touch of brighter hue was accomplished by exhibiting some of the trophies that have been awarded Apperson cars. This display was followed by one featuring the advent of Hallowe'en. The witch with her cauldron, skeletons, black cats and pumpkins made a timely setting for the touring car. Then attractive displays were made for Thanksgiving, Christmas and New Year holidays and these will be followed by other seasonal features. The windows have created widespread comment

Starting in as a bookkeeper with Ford about sixteen years ago Klingensmith rose to the position where he was presumed to be head and shoulders above everyone else in the organization. He succeeded Mayor James Couzens as executive vice-president and general manager and much of the success of the company is attributed to his efforts. The fact that he denies his resignation is regarded in the light of a technicality because he insists on the request coming from Henry Ford rather than Liebold or Sorensen and his official announcement of his resignation is expected later.

To Build Mexican Highway

SACRAMENTO, CAL., Dec. 30—Touring in Mexico for those who cannot get enough thrill from California's highways, will soon be possible, with the construction of the Mexicali-Ensenada highway assured. This highway will run from Mexicali, on the California border in the Imperial Valley, across mountains and over deserts, 100 miles to Ensenada, on the Pacific Coast. It would be a scenic road, but more than that it would be an important commercial artery, and what is more important in Mexico, a military road of strategic value.

COMING EVENTS

SHOWS

Ardmore, Okla.	January	Annual Automobile Show, Ardmore Automobile Dealers' Ass'n, Convention Hall, R. L. Beede, Sec'y.	London, Ont.	Jan. 31-Feb. 5.	National Motor Show of Western Ontario, Automotive Retailers' Ass'n, L. C. Kirby, Mgr.
Pontiac, Mich.	January	Annual Automobile Show, Pontiac Automobile Dealers' Ass'n, Millward Garage.	Erie, Pa.	Jan. 31-Feb. 5.	Annual Automobile Show, Automotive Association of Erie, General Electric Bldg. John Roth.
New York	Jan. 3-8.	Motor Truck Show, Motor Truck Ass'n of America, Twelfth Regiment Armory.	Oakland, Cal.	Jan. 31-Feb. 6.	Annual Automobile Show, Alameda County Automotive Trades Ass'n, Oakland Civic Auditorium.
New York	Jan. 8-15.	National Passenger Car Show, Grand Central Palace National Automobile Chamber of Commerce.	Scranton, Pa.	Jan. 31-Feb. 10.	Passenger Car Show, Scranton Motor Trades Ass'n, Armory, H. B. Andrews, Mgr.
Portland, Ore.	Jan. 10-15.	Annual Automobile Show, Portland Automobile Dealers' Ass'n, Auditorium, W. O. Wilkins.	Madison, Wis.	February	Annual Automobile Show, Automobile Dealers' Division, Madison Ass'n of Commerce, Ordinance Bldg., Don E. Mowry, Mgr.
Philadelphia	Jan. 15-22.	Annual Automobile Show, Philadelphia Automobile Trade Ass'n, Commercial Museum.	Roanoke, Va.	February	Annual Automobile Show, Roanoke Automobile Dealers' Ass'n, Auditorium, W. M. Shickle.
San Antonio, Texas	Jan. 15-23.	Automobile Truck and Tractor Show, San Antonio Automotive Trades Ass'n.	Paterson, N. J.	February	Annual Automobile Show, Armory.
Schenectady, N. Y.	Jan. 16-22.	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Rockford, Ill.	February	Annual Automobile Show, Rockford Automobile Trades Ass'n, Shrine Temple.
Oklahoma City	Jan. 17-22.	Oklahoma City Motor Car Dealers' Ass'n, Auditorium, G. W. Woods, Mgr.	Logan, Utah	Feb. 1-3.	Annual Automobile Show, Cache Valley Automobile and Accessory Ass'n, N. W. Merkle, Pres.
Milwaukee	Jan. 17-23.	Annual Automobile Show, Milwaukee Automobile Dealers' Ass'n.	Bucyrus, Ohio	Feb. 2-5.	Annual Automobile Show, Crawford County Automotive Trade Ass'n, C. J. Carmean, Sec'y.
Kalamazoo, Mich.	Jan. 18-22.	Annual Automobile Show, Kalamazoo Automobile Dealers Ass'n, Armory.	Tampa, Fla.	Feb. 3-12.	Annual Automobile Show, in connection with South Florida Fair, Tampa Automobile Dealers' Ass'n, E. V. Plane, Mgr.
San Francisco	Jan. 22-27.	Second Annual Pacific Coast Automotive Equipment Exposition, Exposition Auditorium.	Minneapolis	Feb. 5-12.	Northwestern Automobile and Industrial Exposition, Northwest Terminal Bldg.
Baltimore	Jan. 22-29.	Annual Automobile Show, Baltimore Automobile Dealers' Ass'n, 5th Regiment Armory, J. C. O'Brien, Mgr.	Columbus	Feb. 7-12.	National Tractor Show, Columbus Tractor and Implement Club, Ohio State Fair Grounds.
Cleveland	Jan. 22-29.	Annual Passenger Car Show, Cleveland Mfrs. and Dealers' Ass'n, Wigmore Coliseum.	Newburg, N. Y.	Feb. 6-12.	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
Montreal	Jan. 22-29.	Annual Automobile Show, Montreal Automobile Trade Association, Motordrome Bldg.	Reading, Pa.	Feb. 7-12.	Annual Automobile Show, Reading Automobile Dealers' Ass'n, Auditorium.
Holyoke, Mass.	Jan. 22-29.	Annual Automobile Show, Holyoke Automobile Dealers' Ass'n, Appleton-Race Bldg.	Rochester, N. Y.	Feb. 7-12.	Automobile Show, Rochester Automotive Trades Ass'n, Exposition Park.
Amsterdam, N. Y.	Jan. 23-29.	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Bridgeport, Conn.	Feb. 7-12.	Annual Automobile Show, Bridgeport Automotive Ass'n, Inc., L. J. McCracken.
Lawrence, Mass.	Jan. 24-29.	First Annual Automobile Show, State Armory, W. H. Partian, Mgr.	Fulsa, Okla.	Feb. 7-12.	Annual Automobile Show, Tulsa Automobile Dealers Ass'n.
New Bedford, Mass.	Jan. 25-29.	Annual Automobile Show, Armory, S. D. Peirce, Mgr.	Yonkers, N. Y.	Feb. 7-12.	Annual Automobile Show, State Armory, W. H. Partian, director.
Lancaster, Pa.	Jan. 26-29.	Annual Automobile Show, Lancaster Automobile Trade Ass'n, Fairmount Garage, R. W. Schreiner, Mgr.	Kansas City	Feb. 12-19.	Annual Automobile Show, Kansas City Motor Car Dealers' Ass'n, Ed Peake, Mgr.
Chicago	Jan. 29-Feb. 4.	National Passenger Car Show, Coliseum, National Automobile Chamber of Commerce.	Hartford, Conn.	Feb. 12-19.	Annual Automobile Show, Hartford Automobile Dealers' Ass'n, Armory, Arthur Fifoot, Mgr.
Cumberland, Md.	Jan. 29-Feb. 5.	Annual Automobile Show, Cumberland Automobile Dealers' Ass'n, State Armory.	Fitchburg, Mass.	Feb. 13-19.	Annual Automobile Show, Armory, W. H. Partian, Mgr.
York, Pa.	Jan. 29-Feb. 6.	Annual Automobile Show, York County Automobile Dealers' Ass'n, Overland Garage, A. H. Geesey, Mgr.	St. Louis	Feb. 14-19.	Annual Automobile Show, St. Louis Automobile Manufacturers' & Dealers' Ass'n, Robert E. Lee, Mgr.
Allentown, Pa.	Jan. 29-Feb. 12.	Annual Automobile Show, Lehigh Automotive Trades Ass'n, Association Bldg.	Trenton, N. J.	Feb. 16-19.	Annual Automobile Show, Trenton Automobile Trade Ass'n, Armory.
Hudson, N. Y.	Jan. 30-Feb. 5.	Annual Automobile Show, Armory, J. J. Callahan, Mgr.			

San Bernardino, Cal....Feb. 18-28.....	Annual Automobile Show in conjunction with National Orange Show, San Bernardino Automotive Trades Ass'n, Wichita Springs Park, Fred M. Renfro, Mgr.	Springfield, Mass. ....March 7-12....	Annual Automobile Show, Springfield Automotive Ass'n, Auditorium, Harry W. Stacy, Mgr.
San Francisco .....Feb. 19-26.....	Fifth Annual Pacific Coast Show, Exposition Auditorium, George Wahlgren, Mgr.	Indianapolis .....March 7-12....	Annual Automobile Show, Indianapolis Automotive Trade Ass'n, State Fair Grounds, John Orman, Mgr.
Albany, N. Y.....Feb. 19-26.....	Annual Automobile Show, Albany Automobile Dealers' Ass'n, Armory, J. B. Wood, Mgr.	Newark, N. J.....March 12-19....	Annual Automobile Show, New Jersey Automobile Exhibition Co., 1st Regiment Armory.
Pittsfield, Mass. ....Feb. 20-26.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Syracuse, N. Y.....March 12-19....	Annual Automobile Show, Syracuse Automobile Dealers' Ass'n, Armory, H. H. Smith, Mgr.
Deadwood, S. D.....Feb. 21-26.....	Annual Automobile Show, Auditorium.	Boston .....March 12-19....	Annual Automobile Show, Boston Automobile Dealers' Ass'n, Mechanic Bldg. and South Armory.
Salt Lake City.....Feb. 21-26.....	Annual Automobile Show, Intermountain Automotive Trade Ass'n, W. D. Rishel, Mgr.	Scranton, Pa.....March 14-17....	Truck and Tractor Show, Scranton Motor Trades Ass'n, Armory, H. B. Andrews, Mgr.
Louisville .....Feb. 21-26.....	Annual Automobile Show, Louisville Automobile Dealers' Ass'n, Armory.	Omaha, Neb.....March 14-19....	Annual Automobile Show, Omaha Automobile Trade Ass'n, Omaha Auditorium, C. G. Powell, Mgr.
Grand Rapids, Mich....Feb. 21-26.....	Automobile Business Association, Furniture Exhibition Bldg., M. D. Elgin, Mgr.	Greenville, S. C.....March 16-19....	Annual Automobile Show, Greenville Dealers' Ass'n, Textile Hall.
Amarillo, Texas.....Feb. 22-24.....	Annual Automobile Show in conjunction with Buyers and Sellers Convention, Amarillo Automotive Ass'n.	Torrington, Conn.....March 20-26....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
Binghamton, N. Y.....Feb. 22-26.....	Annual Automobile Show, Binghamton Dealers' Ass'n, Armory, R. M. Hitt, Chmn.	Chattanooga, Tenn.....April	Annual Automobile Show, Chattanooga Automotive Trade Ass'n, Sunday Tabernacle.
Newton, Kan.....Feb. 23-26.....	Annual Automobile Show, Harvey County Motor Trade Ass'n, Auditorium, Henry Marks, Mgr.	Gloversville, N. Y.....April 3-9.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
Clinton, Iowa.....Feb. 23-26.....	Annual Automobile Show, Clinton County Automobile Dealers' Ass'n, Coliseum, H. C. Finch, Sec'y.	Seattle .....April 4-9.....	Annual Automobile Show, Motor Car Dealers' Ass'n, Arena-Hippodrome, W. J. Coyle, Mgr.
Malone, N. Y.....Feb. 23-26....	Annual Automobile Show.	Buffalo .....April 11-16.....	Motors and Sportsmen's Show, Buffalo Automobile Club, Broadway Auditorium.
Buffalo .....Feb. 26-Mar. 5.....	Annual Automobile Show, Buffalo Automobile Dealers' Ass'n, 74th Regiment Armory, C. C. Proctor, Mgr.	CONVENTIONS	
Columbia, S. C.....March	Annual Automobile Show, Columbia Automotive Trade Ass'n, State Fair Bldg., J. M. Green, Mgr.		
Schenectady, N. Y. ....March	Annual Automobile Show, J. J. Callahan, Mgr.	Milwaukee .....Jan. 19.....	First Annual Convention, Wisconsin Automobile Dealers' Ass'n.
Wichita, Kan.....March 1-5.....	Annual Automobile Show, Wichita Motor Trade Ass'n, Exposition Bldg., Henry B. Marks, Mgr.	Chicago .....Jan. 31-Feb. 1..	Fourth Annual Convention, National Automobile Dealers Ass'n, Hotel La Salle.
Wilmington, Del.....March 1-5.....	Annual Automobile Show, Wilmington Automobile Trade Ass'n, Auditorium.	Chicago .....Feb. 2-4.....	First Annual Meeting Automotive Electric Service Ass'n, Hotel LaSalle, E. E. Turner, Asst. Sec.
Des Moines .....March 2-10.....	Annual Automobile Show, Coliseum, C. G. Van Vleet, Mgr.	Salt Lake City.....Feb. 24-25.....	Annual Meeting, Intermountain Automotive Trades Ass'n.
Brooklyn .....March 5-12.....	Annual Automobile Show, Brooklyn Motor Vehicle Dealers' Ass'n, 23rd Regiment Armory, George C. Lewis, Chmn.	FOREIGN SHOWS	
		Sydney .....Jan. 7.....	Australian Motor Show.
		Delhi, India .....Feb. 7.....	Delhi Motor Car Show.
		Winnipeg .....Feb. 14-19.....	Automotive Equipment Show, W. L. Williams, Secretary of Executive Committee

Southern Dealers Bury Old "Hard Times"



"The Livest Bunch on Earth," which is the name given down south to the Columbia (S. C.) Automotive Trade Association, was the host, Dec. 9-10, to the South Carolina Automotive Trade Association, which held its annual meeting in Columbia. During the meeting a parade led by a funeral cortege bearing the remains of "Hard Times" was held. Here's how they lined up for the camera man

CHANGES In the Trade

Twombly Motor Co., Premier dealer in Cincinnati, has taken the agency for H. C. S.

A. O. Williams is now secretary of the Automotive Association of Cleveland. Dale Brown has been acting secretary for the past year or so and Williams will now take up the active work.

E. S. Partridge, formerly Owen Magnetic and Liberty distributor in New York, has become New York branch manager for the American Motors Corp., manufacturers of the American Six.

Frank B. Willis has been appointed sales manager of the Duplex Truck Co., Lansing, Mich. Willis has been in the automobile business since its inception and his experience covers every phase.

John H. Dielmann and W. D. Dalton, for a number of years with the Weinstock-Nichols Co., have entered business for themselves as the John H. Dielmann Co., Los Angeles. They will act as agents for manufacturers.

James T. Lea, former transportation engineer of the Goodyear Tire Co., has been appointed sales manager for the Oakland, Cal., branch of the Frank A. Busse Sales Co., Brunswick tire distributors for this territory.

Albert I. Dutton, factory sales manager of Master Trucks, Inc., has been placed temporarily in charge of a factory branch, sales and service station which the corporation has just established at 1638 Wabash Avenue, Chicago.

R. H. Blackburn, of the Blackburn Sales Co., Spartanburg, S. C., agent for Oakland and distributor for Indiana trucks, Goodyear tires and automobile supplies, has bought the Todd Oil Co. For the past twelve years Blackburn has been manager of the Petroleum Oil Co. He has severed his connection with this last named concern.

F. T. Newton has been appointed sales director of the Apex Motor Corp., manufacturer of the Ace car, Ypsilanti, Mich. Newton was assistant general manager and sales manager of the former Jackson company, and left this organization to join the Lewis Spring & Axle Co., with which organization he was connected for three years as sales manager.

George Selbert has been named assistant sales manager of the William Small Co., makers of the Monroe car at Indianapolis. Selbert will make his first appearance this year at the New York and Chicago shows with Monroe sales forces and will have much to tell the dealers and distributors of Monroe cars. Prior to joining the William Small forces Selbert was connected with the Gray Dort Motors, Ltd., of Canada.

Howard S. Hamilton has been appointed manager of the western branch of the Rolls-Royce Co. of America, Ltd., which will be located at 900 South Michigan Avenue, Chicago. Hamilton, a newcomer on Automobile Row, has been identified with the sale of Rolls-Royce cars in New York for a number of years. His territory includes all western states. Associated with Hamilton is Henry P. Knight, former sales manager of the Chicago branch of the Locomobile Co.

H. F. Greene, a veteran of fifteen years' standing in the automobile industry, has joined the forces of the Apex Motor Corp. as

district sales representative. Greene started in the automobile business with Ford in 1905 as a road tester, and later became associated with the E-M-F, Metzger Motor Car Co., Hudson Motor Car Co. and Dodge in sales service work in southwest territory. For the last year he has had distribution of the King Eight for three states with headquarters at Dayton, Ohio.

Warden Motor Sales Co., Memphis, Tenn., has taken over the Mitchell for eastern Arkansas, western Tennessee and Mississippi. The executives of this company are Buford Warden, president; Frank Folsom, vice-president; June H. Rudisill, Jr., vice-president, and V. P. Rogers, secretary-treasurer, distributors for the F. W. D. truck and Allen motor car. Associated with the above is C. R. Arnoult, a well and favorably known automobile man throughout the South.

SERVICE ASSOCIATIONS CONVENE JANUARY 10

NEW YORK, Dec. 31—The second annual convention of Automotive Service Associations will be held Jan. 10 at the Hotel Commodore, this city, and all service associations in this vicinity have been invited to participate. The following program has been arranged and may be augmented by speakers from other cities and representatives of national associations:

MORNING SESSION, 10 A. M.

Address by Harry R. Cobleigh, secretary of the Service Committee of the National Automobile Chamber of Commerce.

Reports from secretaries or delegates from all service associations as to activities during the past year.

Open discussion on association work.

Adjournment for lunch. The lunch will be \$2.50 per plate and, if possible, entertainment will be provided.

AFTERNOON SESSION, 2 P. M.

Address by Alfred Reeves, general manager of the National Automobile Chamber of Commerce.

Address by Ray W. Sherman, executive editor, Class Journal papers.

Address by Charles M. Brown, New York branch manager, Oakland Motor Car Co.

Address by Joseph C. Gorey, president Joseph C. Gorey & Co.

Luncheon reservations will be made upon notifying Secretary J. Howard Pile, 239 West Thirty-ninth Street, New York.

Davis Cuts Car Prices

RICHMOND, IND., Dec. 31—Price reductions have been made by the George W. Davis Motor Car Co., effective Jan. 1 on all models. The reductions range from \$200 to \$400 and bring the enclosed models well under the \$3000 mark. The touring car is cut from \$2185 to \$1895; sport car and special roadster, \$2350 to \$2150, and coupe and sedan, \$3185 to \$2795. Lower material costs are given as the cause for the reductions.

Specialty Prices Cut

CAMBRIDGE, MASS., Dec. 31—Prices on its entire line of galvanized garage specialties will be reduced by the Dover Stamping Co.

It's Time to Sell, Dealers Report (Continued from page 11)

precedent. Conditions since Nov. 1 have been about stationary with little buying. Lately there has been a trend toward ordering cars for future delivery.

Detroit Retail Over Crest of the Slump

The crest of the slump has been passed, is the opinion of a majority of dealers, as indicated in the December improvement over that of November.

Overland says September, 1920, was 10 per cent better than last three years, October was 5 per cent better than the last three years, November was 48 per cent below the last three years, and December was 100 per cent better than November.

H. W. Peter, general manager of the Packard branch sales, said the last week in December was not as good as the same week in November, but prospects for an increase in January are good, to be followed by a greater increase in February, and there will be a big business in March.

Dodge reports an increase in December of 33-1/3 per cent over November, and \$18,000 in revenues from used cars delivered in December over allowances for those traded in. Doyle sold 47 used cars in November. The wholesale business is not so good because the upstate dealers are having trouble with the local banks.

Hupmobile said December was not so good as November, but December is always the worst month in the year, and prospects for January show marked improvement which will be steady until spring. The banks are giving reasonable accommodation.

Some Sales, Good Outlook in Denver

Although many dealers are still gloomy over the present conditions, others point out that December is usually a dull month and some have had reasonably good business during the month at that. The upward trend has already been felt by few during the last few days through sales and prospects, and there is substantial confidence of a gradual gain during the next three months, particularly February and March.

A Correction

Hanson & Tyler Co., Fort Dodge, Iowa, which has made an assignment to creditors, was not agent for Chandler cars as was stated at the time the assignment was announced. The Chandler account with the Hanson-Tyler company was closed April, 1919 and since that time the agency has been in other hands.

WILMINGTON INTRODUCED TO MODERN SALESROOM

WASHINGTON, DEL., Dec. 30—The new garage, sales and service building of the Wilmington Automobile Co. has just been completed and occupied by the company. The building, which has a frontage of 300 feet and runs from Tenth Street to Eleventh, has more than 100,000 feet of floor space. It is of fireproof construction, being built of reinforced concrete, and is four stories high, with windows as numerous as it was possible to place them, giving splendid light.

One of the novelties in the construction is a ramp, with double roadway, rising at an easy grade from the Eleventh Street entrance to the third floor level, with a break at the second floor. Access to the fourth floor is given by another ramp from the third, on the west side. This feature does away with the delay and danger of elevators and enables cars to be driven directly to any department.

The office, sales and display rooms

comprise a noteworthy feature, because of their convenient arrangement, and appointments. The company is a local concern. John J. Raskob is chairman of the board of directors; Harry T. Graham, president; E. F. Smith, Jr., vice-president, and Royal C. Hull, secretary and treasurer.

Genung Buys Battery Company

KANSAS CITY, Dec. 30—H. M. Genung, formerly manager of the H. A. Dougherty Motor Co., has disposed of his interests in that business and purchased the Superior Storage Battery Co. which had a factory here, and plans to expand as soon as conditions permit. The battery is of standard construction and the merchandising plan includes an appeal to the motor car dealer to develop this profitable end of his business. Genung states that indications during the past ten or fifteen days have been very encouraging in the trade generally in the Southwest, and that a marked improvement is anticipated when the shows end.

CALIFORNIA LAYS OUT TRANS-MOUNTAIN ROADS

SACRAMENTO, CAL., Dec. 30—Plans to raise \$450,000 in Northern California to aid Nevada in the construction of the Pike's Peak highway across that state are maturing in good shape.

All the counties of the state are contributing to the fund on the basis of assessed valuation. Nevada and Utah are to raise an equal amount and the Federal Government will match the combined sum. The plan is to get a northern route which will bring at least half the tourist travel from the East by the cities of the northern part of the state, so they may share in the tourist trade Los Angeles has been enjoying almost exclusively.

Los Angeles has responded to the activity in the north by announcing a new pass over the mountains from Tonopah, Nevada, which will make a route not hampered by snow in the Winter, which will be easier of ascent.

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	
Allis-Chalm. 6-12	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	G-O	14-28	\$1485	4	Wauk.	4-4 1/2 x 5 1/2	Ker.	3	Pioneer	13-36	
Allis-Chalm. 10-18	3	Own	2-5 1/2 x 7	G.K.	2-3	Grain Belt	18-36	2500	4	Wauk.	4-1 1/2 x 6 1/2	G.K.	4	Pioneer	15-30	
Allis-Chalm. 18-30	4	Own	4-1 1/2 x 8 1/2	G.K.	3-4	Gray	18-36	2500	3	Wauk.	4-1 1/2 x 6 1/2	G.K.	4	Pioneer	15-30	
Allwork 11	2-25	4	Own	4-4 1/2 x 6	G.K.	3	Ground Hog	2800	4	Wauk.	4-4 x 6	Ker.	4	Port Huron	12-25	
Allwork 14	2-28	4	Own	4-5 x 6	G.K.	3	Gt. Western St	20-30	1950	4	Beav.	4 1/2 x 6	K.	4	Post	12-20
Andrews-KinD 18-36	4	Clim.	4-5 1/2 x 6 1/2	G.K.	4	Hart-Parr	20	1195	4	Own	2-5 1/2 x 6 1/2	K.D.	3	Prairie Dog	9-18	
Appleton 12-20	\$1500	4	Buda	4-1 1/2 x 5 1/2	G.K.	2-3	Hart-Parr	30	1595	4	Own	2-6 1/2 x 7	K.D.	3	Prairie Dog	15-30
Aultman-T. 15-30	4	Clim.	4-5 x 6 1/2	G.K.	4	Heider	9-16	1000	4	Wauk.	4-1 1/2 x 5 1/2	G.K.	2	Ranger Cult.	8-16	
Aultman-T. 22-45	4	Own	4-5 1/2 x 8	G.K.	6	Heider	12-20	1200	4	Wauk.	4-1 1/2 x 6 1/2	G.K.	3	Reed	15-30	
Aultman-T. 30-60	4	Own	4-7 x 9	G.K.D.	8	Heider	6-10	1000	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Reliable	10-20	
Automet. B-3 12-24	4	Here's	4-4 x 5 1/2	G.K.	2-3	Hicks	15-30	1750	4	Wauk.	4-4 1/2 x 6	Kor G.	4	Reo	12-25	
Avery-SR.Cul 5-10	4	Own	4-3 x 4	G.K.	2	Huber	12-25	1385	4	Wauk.	4-4 1/2 x 5 1/2	G.K.D.	3	Samson	4	
Avery Cult 3-5	3	Own	6-3 x 4	G.K.	2	Illinois	8-16	2375	4	Clim.	4-5 x 6 1/2	G.K.	4	Sandusky	10-20	
Avery Plan 5-10	4	Own	6-3 x 4	G.K.	2	Imperial	40	5000	4	Own	4-7 1/2 x 9	G.K.D.	10	Sandusky	15-35	
Avery B 5-10	4	Own	6-3 x 4	G.K.	2	Indiana	5-10	1000	2	LeR.	4-3 1/2 x 4	Gas.	1	Shawnee	6-12	
Avery C 8-16	4	Own	2-6 1/2 x 6	G.K.D.	2-3	International	8-16	1000	4	Own	4-4 1/2 x 5	G.K.D.	2	Shawnee	9-18	
Avery 12-25	4	Own	2-6 1/2 x 7	G.K.D.	3-4	International	15-30	1500	4	Own	4-5 1/2 x 8	G.K.D.	4	Shelby	9-18	
Avery 14-28	4	Own	4-4 1/2 x 6	G.K.D.	3-4	J-T	16-30	1600	2	Chief	4-4 1/2 x 6	G.K.	3-4	Shelby	15-30	
Avery 18-36	4	Own	4-5 1/2 x 6	G.K.D.	4-5	Kerdell Util.	12-25	1650	4	Midw.	4-4 1/2 x 5 1/2	GorK	3	Short Turn	20-40	
Avery 25-50	4	Own	4-6 1/2 x 7	G.K.D.	5-6	Keck-Geo	15-30	1650	4	Own	2-7 1/2 x 8	G.K.	3	Square T.	18-35	
Avery 45-65	4	Own	4-7 1/2 x 8	G.K.D.	8-10	Klumb	16-32	1600	4	Clim.	4-5 x 6 1/2	G.K.	3	Steady Pull	12-24	
Bates All St. 15-25	4	Own	4-4 1/2 x 6	Ker.	3	LaCrosse	7-12	950	4	Own	2-4 x 6	G.K.	3	Stearns	20-40	
Bates S.M. 15-22	4	Own	4-4 1/2 x 6	G.K.D.	3	LaCrosse	12-24	1250	4	Own	2-6 x 7	Ker.	3	Stinson	18-36	
Beem 8-16	1	Own	14-3 1/2 x 4	G.K.	2-3	Lauson	15-25	1000	4	Beav.	4-4 1/2 x 6	G.K.D.	3-4	Stinson	20-40	
Beeman 2-4	340	2	Own	1-3 1/2 x 4 1/2	Gas.	2-4	Lauson	15-30	1000	4	Beav.	4-4 1/2 x 6	G.K.D.	3-4	Targa	15-27
Best 30-60	3250	2	Own	4-4 1/2 x 8 1/2	G.K.D.	8-11	Lauson	15-30	1000	4	Beav.	4-4 1/2 x 6	G.K.D.	3-4	Targa	15-27
Best 35-60	3750	2	Own	4-4 1/2 x 8 1/2	G.K.D.	8-11	Lauson Read	15-30	1000	4	Beav.	4-4 1/2 x 6	G.K.D.	3-4	Targa	15-27
Boring 12-24	1200	3	Wauk.	2-5 1/2 x 7	G.K.	2	Leader	12-20	1000	4	Own	2-6 x 8 1/2	G.K.D.	2-3	Targa	15-27
Burn-Ord 15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3	Leader	16-32	1000	4	Clim.	4-5 x 6 1/2	G.K.	4	Targa	15-27
Capital 15-30	1500	2	Own	4-4 1/2 x 6	Gas.	33	Leader	16-32	1000	4	Clim.	4-5 x 6 1/2	G.K.	4	Targa	15-27
Case 10-18	1200	4	Own	4-3 1/2 x 5	G.K.D.	2-3	Leonard	18-32	2475	4	Clim.	4-5 x 6 1/2	G.K.	4	Targa	15-27
Case 15-27	1800	4	Own	4-4 1/2 x 6	G.K.D.	3-4	Liberty	18-32	2475	4	Clim.	4-5 x 6 1/2	G.K.	4	Targa	15-27
Case 22-40	3100	4	Own	4-5 1/2 x 6 1/2	G.K.D.	4-5	Little Bear	4	850	4	Ford	4-3 1/2 x 4	Gas.	1	Targa	15-27
Caterpillar 25-40	2	Own	4-4 1/2 x 6	Gas.	4	Little Giant	16-22	2200	4	4	4-4 1/2 x 5	K	4	Targa	15-27	
Caterpillar 40-60	2	Own	4-6 1/2 x 7	Gas.	6	Little Giant	26-35	3300	4	4	4-5 1/2 x 6	K	6	Targa	15-27	
Chase 12-25	1785	3	Buda	4-1 1/2 x 5 1/2	G.K.D.	2-3	Lombard	83-150	2	Own	4-5 1/2 x 6 1/2	Gas.	12	Targa	15-27	
Chasrac 12-20	1495	2	Own	4-4 x 5 1/2	G.K.D.	2-3	Macultivator	1 1/2	225	2	Wauk.	1-2 1/2 x 3 1/2	Gas.	1	Targa	15-27
Dakota 15-27	1750	3	Dom.	4-1 1/2 x 6	G.K.	3	Magnet	14-28	225	2	Wauk.	4-4 1/2 x 6 1/2	Gas.	1	Targa	15-27
Dart B.J. 15-30	2000	4	Buda	4-4 1/2 x 6	Gas.	3-4	Market	2-4 1/2	225	2	Wauk.	1-4 x 4	Gas.	1	Targa	15-27
Dill 20	2490	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Master Jr.	4-8	230	2	LeR.	3-3 1/2 x 4	Gas.	1	Targa	15-27
Eagle 12-22	1390	4	Own	2-7 x 8	Ker.	3	Merry Car	2	230	2	LeR.	3-3 1/2 x 4	Gas.	1	Targa	15-27
Eagle 16-30	1850	4	Own	2-8 x 8	Ker.	4	Minne. All-P.	12-25	1325	2	LeR.	3-3 1/2 x 4	Gas.	1	Targa	15-27
E-B 12-20	1200	4	Own	4-4 1/2 x 5	Ker.	3	Mohawk	8-16	755	2	LeR.	3-3 1/2 x 4	Gas.	1	Targa	15-27
E-B 12-20	1200	4	Own	4-4 1/2 x 5	Ker.	3	Moline Univ.	9-18	1325	2	LeR.	3-3 1/2 x 4	Gas.	1	Targa	15-27
E-B 16-32	1600	4	Own	4-5 1/2 x 7	Ker.	4	Moline Orch.	9-18	1375	2	LeR.	3-3 1/2 x 4	Gas.	1	Targa	15-27
E-B Reeves 40-65	2000	4	Own	4-7 1/2 x 9	Ker.	8-10	Monarch	30-18	3250	2	LeR.	3-3 1/2 x 4	Gas.	1	Targa	15-27
Evans 18-30	2000	4	Buda	4-4 1/2 x 6	G.K.	4	Motex	15-30	2350	4	Buda	4-4 1/2 x 6	Gas.	3	Targa	15-27
Fagel 9-12	1325	4	Lyc.	4-3 1/2 x 5	G.K.D.	2	New Britain	1	450	1	Own	2-3 1/2 x 4	Gas.	1	Targa	15-27
Farm Horse 18-30	1885	4	Clim.	4-5 x 6 1/2	G.K.	3-4	New Britain	2	500	1	Own	2-3 1/2 x 4	Gas.	1	Targa	15-27
Farquhar 15-25	3	Buda	4-4 1/2 x 6	G.K.D.	3-4	Nelson Spec.	10-20	1000	4	Wauk.	4-3 1/2 x 5 1/2	G.K.	4	Targa	15-27	
Farquhar 18-35	4	Own	4-6 x 8	G.K.	4-5	Nelson Senior	20-40	2675	5	Wauk.	4-5 x 6 1/2	G.K.	4	Targa	15-27	
Farquhar 25-50	4	Own	4-7 x 8	G.K.	6-7	Oil Pull	12-20	1000	4	Own	2-6 x 8	K.D.	3	Targa	15-27	
Fitch 20-35	4	Clim.	4-5 x 6 1/2	G.K.D.	3-4	Oil Pull	16-30	1000	4	Own	2-7 x 8 1/2	K.D.	4	Targa	15-27	
Flour City 20-35	4	Own	4-5 1/2 x 6	Ker.	4-6	Oil Pull	20-40	1000	4	Own	2-8 x 10	K.D.	5-6	Targa	15-27	
Flour City 30-50	4	Own	4-6 1/2 x 7	Ker.	6-8	Oil Pull	30-60	1000	4	Own	2-10 x 12	K.D.	8-10	Targa	15-27	
Flour City 40-70	4	Own	4-7 1/2 x 9	Ker.	8-11	Oldsmar	1 1/2	395	2	Own	1-5 1/2 x 5 1/2	G.K.	3	Targa	15-27	
Fordson 18-30	2256	2	Erd.	4-4 1/2 x 6	G.K.	2-3	Oliver	15-30	3300	2	Beav.	4-4 1/2 x 6	GorK	3	Targa	15-27
Franklin-FlexB 15-25	2256	2	Erd.	4-4 1/2 x 6	G.K.	2-3	Oliver	15-30	3300	2	Beav.	4-4 1/2 x 6	GorK	3	Targa	15-27
Franklin-BullC 18-30	2730	2	Erd.	4-4 1/2 x 6	G.K.	2-3	Oliver	15-30	3300	2	Beav.	4-4 1/2 x 6	GorK	3	Targa	15-27
Franklin-BullG 18-30	3850	2	Erd.	4-4 1/2 x 6	G.K.	2-3	Oliver	15-30	3300	2	Beav.	4-4 1/2 x 6	GorK	3	Targa	15-27
Frick A 12-20	1200	4	Own	4-4 x 6	G.K.	3	Parrott	15-30	1000	4	Par.	4-4 1/2 x 6	G.K.	3	Targa	15-27
Frick C 15-28	1200	4	Own	4-3 1/2 x 6	G.K.	3-4	Parrott	15-30	1000	4	Par.	4-4 1/2 x 6	G.K.	3	Targa	15-27

ABBREVIATIONS: G—Gasoline. K—Kerosene. D—Distillate. Flow capacity varies in relation to operating conditions. Figures are based on 14-in. plows. LeR.—LeRoi. Clim.—Climax. Beav.—Beaver. Dom.—Domestic. Cont.—Continental. Wauk.—Waukecha. Wisc.—Wisconsin. T.C.—Twin City. Vur.—Vurao. Evin.—Evinrude. Midw.—Midwest. Com.—Commercial. Tractor.—Crawler type. All others are wheeltypes.

Specifications of Current Models of Passenger Cars

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2 Pass.	5 Pass.	7 Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2 Pass.	5 Pass.	7 Pass.	Coupe	Sedan
Ace.....	H-S	6-3 1/2 x 5	115	32x4	\$2260	\$2260	.....	.....	.....	Madison.....	Ow.	6-3 1/2 x 5	115	33x4	\$1570	\$1570	.....	.....	.....
Allen.....	Series 43	4-3 1/2 x 5	110	32x4	.....	1595	.....	.....	.....	Maibohm.....	B	6-3 1/2 x 4 1/2	116	32x4	1575	1575	.....	\$2395	.....
American.....	C H-S	6-3 1/2 x 5	127	32x4	2305	2305	\$2475	\$3205	3495	Marmen.....	34	6-3 1/2 x 5 1/2	136	32x4 1/2	5300	.....	\$5000	6150	6000
Anderson.....	30	6-3 1/2 x 4 1/2	120	33x4	2195	2145	2195	3300	3300	Maxwell.....	25	6-3 1/2 x 5 1/2	109	30x3 1/2	995	995	.....	1395	1695
Apperson.....	820 S	6-3 1/2 x 5	130	34x4 1/2	.....	3500	3500	4500	4500	McFarlan.....	147	6-4 1/2 x 6	140	35x5	6300	6300	6300	7500	7500
Apperson Anniversary	Ow.	8-3 1/2 x 5	130	34x4 1/2	.....	4250	4250	6000	6000	Mercer.....	Series 5	4-3 1/2 x 6 1/2	132	32x4 1/2	1035	1035	*3950	5150	6500
Auburn.....	639 H-K	6-3 1/2 x 4 1/2	120	32x4	1945	1895	.....	2995	2995	Meteor.....	K&R Dues.	4-4 1/2 x 6	129	32x4 1/2	5500	5500	.....	.....	.....
Beggs.....	20T	6-3 1/2 x 4 1/2	120	33x4	.....	2000	.....	.....	.....	Metz.....	M6	6-3 1/2 x 5	120	32x4	1995	1995	.....	2795	2895
Bell.....	H-S	4-3 1/2 x 5	114	31x4	1495	1495	.....	.....	.....	Mitchell.....	F-40	6-3 1/2 x 5	10	33x4	1750	1750	2800	3400	.....
Biddle.....	B1	4-3 1/2 x 5 1/2	121	32x4	3750	3750	3950	.....	.....	Monitor.....	S-3	6-3 1/2 x 4 1/2	121	33x4	2475	2475	.....	3475	.....
Bour-Davis.....	21	6-3 1/2 x 5 1/2	126	33x4 1/2	2585	2535	2585	.....	.....	Monroe.....	S-9	4-3 1/2 x 4 1/2	115	32x3 1/2	1440	110	.....	.....	.....
Bradley.....	Four	.....	.....	.....	1265	.....	.....	.....	.....	Moon.....	6-48	6-3 1/2 x 4 1/2	122	32x4	2085	1985	.....	2985	2185
Brewster.....	Ow.	4-4 x 5 1/2	125	34x4 1/2	.....	19000	.....	.....	10500	Moon.....	6-68	6-3 1/2 x 5 1/2	15	32x4 1/2	2515	.....	205	3415	3115
Briscoe.....	4-34	4-4 x 5	109	31x4	1285	1285	.....	1885	1885	Moore.....	30	4-3 x 5	106	30x3 1/2	.....	1095	.....	.....	.....
Brook.....	S-21	2-3 1/2 x 67	90	28x3	395	.....	.....	.....	.....	Murray.....	Ow.	8-3 1/2 x 5	128	34x4 1/2	.....	5500	.....	.....	.....
Buick.....	21-44-5-6-7	6-3 1/2 x 4 1/2	118	33x4 1/2	1795	1795	.....	2585	2895	Nash.....	681-6	6-3 1/2 x 5	121	33x4	1695	1695	1550	.....	2895
Buick.....	21-48-9-50	6-3 1/2 x 4 1/2	124	34x4 1/2	.....	.....	2065	2985	3295	Nash.....	682	6-3 1/2 x 5	127	34x4 1/2	.....	1375	2650	.....	2895
Cadillac.....	59	8-3 1/2 x 5 1/2	125	34x4 1/2	3790	3790	3940	4540	4950	National Sextet.....	BB	6-3 1/2 x 5 1/2	130	32x4 1/2	3750	3750	3750	4900	4950
Case.....	V	6-3 1/2 x 5 1/2	126	34x4 1/2	.....	2650	2650	3400	3750	Nelson.....	D	4-3 1/2 x 4 1/2	104	32x4	.....	1700	.....	.....	.....
Chalmers.....	6-30	6-3 1/2 x 4 1/2	117	32x4	1795	1755	.....	2595	2745	Noma.....	1C	6-3 1/2 x 4 1/2	128	32x4 1/2	3000	3200	.....	.....	.....
Chalmers.....	630	6-3 1/2 x 4 1/2	122	33x4 1/2	.....	.....	1945	.....	.....	Norwalk.....	430-KS	4-3 1/2 x 5	116	32x3 1/2	.....	1385	.....	.....	.....
Champion.....	C4	4-3 1/2 x 5	118	32x4	1595	1595	.....	.....	.....	Oakland.....	34-C	6-2 1/2 x 4 1/2	115	32x4	1395	1395	.....	2065	2065
Candler.....	Ow.	6-3 1/2 x 5	123	33x4	1895	1975	1895	2895	2995	Ogren.....	6-60	6-3 1/2 x 5 1/2	134	.....	3750	*3900	4750	5000	.....
Chevrolet.....	490	4-3 1/2 x 4	102	30x3 1/2	795	820	.....	1325	1375	Oldsmobile.....	4	8-2 1/2 x 4 1/2	122	33x4 1/2	.....	2100	2100	.....	3300
Chevrolet.....	FB	4-3 1/2 x 4 1/2	110	33x4	320	1345	.....	2075	2075	Oldsmobile.....	37-A	6-2 1/2 x 4 1/2	112	32x4	1450	1450	.....	2145	1145
Chrysler.....	40	6-3 x 4 1/2	112	32x4	1435	1435	.....	2345	2445	Overland.....	4	4-3 1/2 x 4	100	30x3 1/2	895	895	.....	1125	1175
Climber Four.....	H-S	4-3 1/2 x 5	117	33x4	1550	1550	.....	.....	.....	Owen Magnetic.....	60	6-4 x 5 1/2	142	35x5	*7000	7000	7000	8000	1500
Climber Six.....	H-S	6-3 1/2 x 5	125 1/2	32x4 1/2	2710	2750	.....	3250	.....	Packard.....	Six	6-3 1/2 x 4 1/2	116	33x4 1/2	2795	2795	.....	4150	4250
Cole.....	870	6-3 1/2 x 4 1/2	127	33x5	3250	3250	3250	4450	.....	Packard.....	Ow.	12-3 x 5	136	35x5	6000	6000	6000	8200	1150
Columbia.....	D-C&CS	6-3 1/2 x 4 1/2	115	32x4	1945	1795	.....	2895	2895	Paige.....	6-42	6-3 1/2 x 5	119	32x4	1770	*1700	2795	3675	1615
Comet.....	C-53	6-3 1/2 x 5 1/2	125	33x4 1/2	.....	2350	.....	.....	2465	Paige.....	6-66	6-3 1/2 x 5	131	33x4 1/2	.....	1500	.....	.....	1750
Commonwealth.....	H-S	4-3 1/2 x 5	117	32x4	1785	1595	.....	.....	.....	Pan American.....	A	6-3 1/2 x 5	121	33x4	2450	2400	.....	.....	1800
Crawford.....	21-6-40	6-3 1/2 x 5 1/2	122 1/2	32x4	3000	3000	3000	4500	4500	Patersen.....	650	6-3 1/2 x 4 1/2	120	33x4	1835	1935	2895	2895	.....
Crow-Elkhart.....	LS3-55	4-3 1/2 x 5	117	32x3 1/2	1295	1295	.....	2195	.....	Pearless.....	56	6-3 1/2 x 4 1/2	125	34x4 1/2	.....	3200	3200	3920	4140
Crow-Elkhart.....	HS3-55	6-3 1/2 x 5	117	33x4	1545	1545	.....	2395	.....	Piedmont.....	4-30	4-3 1/2 x 5	116	32x3 1/2	.....	1485	.....	.....	.....
Cunningham.....	V-3	8-3 1/2 x 5	132	35x5	.....	.....	.....	.....	.....	Piedmont.....	4-40	6-3 1/2 x 4 1/2	122	32x4 1/2	.....	1945	.....	.....	.....
Daniels.....	D	8-3 1/2 x 5 1/2	132	34x4 1/2	4850	4850	6250	6950	.....	Pierce-Arrow.....	48	6-4 1/2 x 5 1/2	142	35x5	17900	7900	8000	9000	.....
Davis.....	51-57	6-3 1/2 x 4 1/2	120	33x4	2125	2085	2250	3085	3085	Pierce-Arrow.....	38	6-4 1/2 x 5 1/2	134	34x4 1/2	7500	7500	7500	8500	9000
Dispatch.....	G	4-3 1/2 x 5	120	34x4	1290	1350	1350	1525	1575	Pilot.....	6-45	6-3 1/2 x 5	120	32x4	1945	1895	.....	2850	2900
Dixie Flyer.....	H-S-70	4-3 1/2 x 5	112	32x4	1595	1595	.....	2370	2570	Porter.....	45	4-4 1/2 x 6 1/2	142	35x5	6750	Chassis	.....	.....	6000
Dodge Brothers.....	Ow.	4-3 1/2 x 4 1/2	114	32x3 1/2	1235	1285	.....	1900	2150	Premier.....	6-D	6-3 1/2 x 5 1/2	126 1/2	32x4 1/2	4600	4600	4600	5600	.....
Dorris.....	6-80	6-4 x 5	132	33x5	.....	4785	5800	6690	.....	Ranger.....	A-20	4-3 1/2 x 5	116	32x4	.....	1850	.....	.....	.....
Dort.....	15	4-3 1/2 x 5	105 1/2	31x4	1215	1215	.....	1865	1995	R & V Knight.....	R	4-3 1/2 x 5	115	32x4	.....	2150	.....	.....	2000
Dupont.....	A	4-3 1/2 x 5 1/2	124	32x4 1/2	3400	3400	.....	4900	.....	R & V Knight.....	R	6-3 1/2 x 4 1/2	127	32x4 1/2	3550	3550	3550	4100	.....
Elcar.....	D.H.K.G.	4-3 1/2 x 5	117	33x4	.....	1495	1495	2095	2195	Ree.....	T-6	6-3 1/2 x 5	120	33x4	1850	1850	2700	2700	.....
Elcar.....	D.H.K.G.	6-3 1/2 x 4 1/2	117	33x4	.....	1795	1795	2395	2495	Revere.....	C	4-4 1/2 x 6	131	32x4 1/2	4850	4650	4650	6500	.....
Elgin.....	K	6-3 1/2 x 4 1/2	118	33x4	1895	1775	.....	2685	2685	Roamer.....	C-6-54	6-3 1/2 x 5 1/2	128	32x4 1/2	.....	.....	.....	.....	.....
Essex.....	A	4-3 1/2 x 5	108 1/2	32x4	1595	1595	.....	2100	2450	Roamer.....	D-4-75	4-4 x 6	128	32x4 1/2	.....	.....	.....	4500	5000
Ferris.....	Cont.	6-3 1/2 x 5 1/2	130	32x4 1/2	.....	.....	*3350	.....	4875	Saxon.....	12	4-3 1/2 x 5	112	32x4	.....	1895	.....	2795	2795
Ford.....	T	4-3 1/2 x 4	100	30x3 1/2	395	440	.....	745	795	Sayers.....	Six-42	6-3 1/2 x 4 1/2	118	33x4	2595	2195	.....	3145	.....
Franklin.....	9-B	6-3 1/2 x 4	115	32x4	2400	2600	2500	3600	3600	Scraps-Booth.....	Six-B	6-2 1/2 x 4 1/2	115	32x4	1545	1545	.....	2215	2215
Friend.....	Ow.	4-3 1/2 x 4 1/2	112	32x3 1/2	1585	1585	.....	2485	2585	Seneca.....	L	4-3 1/2 x 4 1/2	108	30x3 1/2	1185	1185	.....	.....	.....
Grant.....	HX	6-3 1/2 x 4 1/2	116	32x4	1550	1550	.....	2450	2450	Severin.....	4	6-3 1/2 x 5 1/2	122	32x4	.....	2400	.....	.....	.....
Gardner.....	Lye.	4-3 1/2 x 5	112	32x3 1/2	1195	1195	.....	2145	.....	Sheridan.....	4	4-3 1/2 x 5 1/2	116	33x4	1685	1685	.....	.....	.....
Halladay.....	M	6-3 1/2 x 5	122	.....	.....	.....	.....	3250	.....	Singer.....	Series 20	6-2 1/2 x 5	138	33x5	6500	6500	6500	5600	.....
Handley-Knight.....	Knight	4-4 1/2 x 4 1/2	125	32x4 1/2	.....	2935	.....	.....	.....	Skelton.....	35	4-3 1/2 x 5	112	32x3 1/2	1245	1245	.....	.....	.....
Hanson.....	54	6-3 1/2 x 4 1/2	121	32x4	2365	2365	2465	2885	2885	Standard.....	I	8-3 1/2 x 5	127	34x4 1/2	.....	.....	.....	.....	.....
Hatfield.....	H-S	4-3 1/2 x 5	115	32x4	1695	1695	.....	.....	.....	Stanley Steamer.....	Ow.	2-4 x 5	130	34x4 1/2	.....	3050	3950	5650	5775
Haynes.....	47	6-3 1/2 x 5	132	34x4 1/2	2685	2935	2935	3650	4250	Stearns.....	SKL4	6-3 1/2 x 5 1/2	125	34x4 1/2	2550	2450	2675	3100	3760
Haynes.....	48	12-2 1/2 x 5	132	34x4 1/2	.....	3635	3635	4350	4950	Stevens.....	80	6-3 1/2 x 4 1/2	122	33x4 1/2	2400	2400	2400	3100	3100
Huffman.....	R	6-3 1/2 x 4 1/2	120	32x4	1995	1995	.....	2975	.....	Studebaker.....	EJ-40	6-4 1/2 x 5 1/2	138	35x5	18000	.....	8000	9000	9500
H.C.S.....	Weid.	4-3 1/2 x 5 1/2	120	32x4 1/2	2925	2975	.....	.....	.....	Studebaker.....	EH-50	6-3 1/2 x 5	119	32x4	1750	1750	1750	2650	2750
Hollier.....	206-B	6-3 1/2 x 4 1/2	120	32x4	.....	1985	.....	.....	.....	Studebaker.....	EG-60	6-3 1/2 x 5	126	33x4 1/2	.....	2150	.....	.....	.....
Holmes.....	Ow.	6-3 1/2 x 4 1/2	126	34x4 1/2	3350	.....	3350	4250	4550	Stutz.....	Ow.	4-3 1/2 x 6	130	32x4 1/2	3900	4000	*4000	5500	.....
Hudson Super 6.....	O	6-3 1/2 x 5	126	34x4 1/2	2400	.....	2400	3275	3										

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
A. & B. 3T	3	.....	54x4x4	48x3x4	48x3x4	I	Corbett, B	2 1/2	\$3650	4 1/2 x 5 1/2	36x4	36x4d	W	Gramm, 10	1	\$1496	3 1/2 x 5	33x5 1/2	33x5 1/2	B
A. & B. 5T	5	.....	54x4x4	48x3x4	48x5d	I	Corbett, AA	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x10	W	Gramm, 15	1 1/2	2050	3 1/2 x 5	36x3 1/2	36x5	I
Acason, R	1	.....	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Couple Gear, HC	3 1/2	6100	3 1/2 x 5 1/2	34x4	34x4d	W	Gramm, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Acason, R.B	1 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W	Couple Gear, AC	5	6700	5 1/2 x 7	35x5	35x5d	W	Gramm, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4d	W
Acason, L	2 1/2	.....	4 1/2 x 5 1/2	36x5	36x5d	W	Couple Gear, LD	7	7450	5 1/2 x 7	35x5	35x5d	W	Gramm, 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W
Acason, M	3 1/2	.....	5 x 6 1/2	36x6	40x6d	W	Dart, S	1 1/2	2250	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Gramm, 50	5	5275	4 1/2 x 6	36x6	40x6d	W
Ace, C	1 1/2	\$2750	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Dart, M	2 1/2	3000	4 1/2 x 5 1/2	36x4	36x7	W	Grant, 17	1 1/2	2675	3 1/2 x 5	35x5 1/2	38x7 1/2	W
Ace, A	2 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Dart, W	3 1/2	4000	4 1/2 x 6	36x5	36x10	W	Hahn, J4	1	.....	3 1/2 x 5	36x3 1/2	36x5	W
Ace	3	3850	4 1/2 x 5 1/2	36x6	36x8	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Acme, B	1	2175	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Hahn, DE	2	.....	4 1/2 x 5 1/2	36x4	36x7	W
Acme, F	1 1/2	2475	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, D	2	2750	4 1/2 x 5 1/2	36x4	36x6	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Acme, A	2	3050	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W
Acme, C	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, F	3 1/2	3700	4 1/2 x 5 1/2	36x5	36x5d	W	Hahn, EF	5 1/2	.....	4 1/2 x 6	36x6	40x12	W
Acme, E	5	5150	4 1/2 x 6	36x6	40x12	W	Day-Elder, E	5	4600	4 1/2 x 6	36x5	40x6d	W	Hal-Far, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Air-O-Flex, C	1 1/2	.....	3 1/2 x 5 1/2	36x3 1/2	36x5	I	Dearborn, F	1 1/2	2180	3 1/2 x 5	34x4	34x5	W	Hal-Far, B	2 1/2	3250	4 1/2 x 5 1/2	35x5 1/2	38x7	W
AB-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Dearborn, 48	2	2590	3 1/2 x 5 1/2	34x4 1/2	34x7	W	Hall	2 1/2	.....	4 1/2 x 5 1/2	36x5 1/2	36x4d	W
AB-American, B-1	1	1705	3 1/2 x 5	32x4	32x4	I	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	36x7 1/2	W	Hall	3 1/2	.....	4 1/2 x 5 1/2	36x5 1/2	36x5d	W
AB-American, C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	I	Defiance, E	2	2750	3 1/2 x 5	35x5 1/2	36x7 1/2	W	Hall	5	.....	4 1/2 x 5 1/2	36x5	40x6d	W
American, 40	4	4575	4 1/2 x 6	36x5	36x10	W	DeKalb, E2	2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Hall	7	.....	4 1/2 x 5 1/2	36x5	40x6d	C
Apex, C	1	1745	4 1/2 x 5 1/2	33x4 1/2	32x3 1/2	I	DeKalb, E2 1/2	2 1/2	2600	4 1/2 x 5 1/2	36x4	36x6	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Apex, D	1 1/2	1915	3 1/2 x 5 1/2	32x3 1/2	32x4	I	Demby, 12	1	2400	3 1/2 x 5	35x5	36x6	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Apex, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x6	W	Demby, 134	2	2900	3 1/2 x 5	36x3 1/2	36x6	W	Harvey, WHA	2 1/2	4300	4 1/2 x 6	36x5	36x5d	W
Armstrong, HW	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x4d	W	Demby, 25	3	3600	4 1/2 x 5 1/2	36x4	36x7	W	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6d	W
Armstrong, KW	3 1/2	.....	4 1/2 x 6	36x5	36x5d	W	Demby, 27	4	4600	4 1/2 x 5 1/2	36x5	36x5d	W	Hawkeye, K	1 1/2	2345	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Armstrong, 20	1	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Demby, 210	5	5350	4 1/2 x 5 1/2	36x6	36x6d	W	Hawkeye, M	2	2915	4 1/2 x 5 1/2	36x4	36x6	I
Atco	1 1/2	2450	3 1/2 x 5 1/2	34x5	36x6	W	Dependable, A	5 1/2	1675	3 1/2 x 5	34x5	36x6	W	Hawkeye, N	3 1/2	.....	4 1/2 x 6	38x7 1/2	44x10 1/2	I
Atlas	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Hawkeye, N	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Attarbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Dependable, D	2	2650	4 1/2 x 5	34x5	36x6	W	Hawkeye, N	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W
Attarbury, 7CX	2 1/2	3675	4 1/2 x 5 1/2	36x4	36x4d	W	Dependable, E	2 1/2	3500	4 1/2 x 5 1/2	36x4	36x7	W	Hawkeye, N	5	5400	5 x 6	36x6	40x6d	W
Attarbury, 7D	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W	Dependable, G	3 1/2	3700	4 1/2 x 6	36x6	38x7	W	Highway, A 410	4	.....	4 x 6	36x5	36x6d	W
Attarbury, 8E	5	5975	4 1/2 x 6	36x5	40x6d	W	Diamond-T, T	1 1/2	2450	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Highway, B 510	5	.....	4 x 6	36x5	40x6d	W
Autocar, 21UF	2	2300	4 1/2 x 4 1/2	34x4	34x5	W	Diamond-T, FS	1 1/2	2715	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Highway, A 115	1	2100	3 1/2 x 5	36x5	36x5	W
Autocar, 21UG	2	2400	4 1/2 x 4 1/2	34x4	34x5	D	Diamond-T, U	2	2835	4 x 5 1/2	36x4	36x7	W	Highway, B20	1 1/2	2500	4 1/2 x 5 1/2	34x5	36x6	W
Autocar, 10	5	2100	3 1/2 x 5	34x10	34x10	I	Diamond-T, K	3 1/2	3925	4 1/2 x 5 1/2	36x5	36x5d	W	Highway, B20	1 1/2	2500	4 1/2 x 5 1/2	34x5	36x6	W
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	35x5 1/2	38x7 1/2	W	Diamond-T, EL	5	4615	4 1/2 x 5 1/2	36x6	40x6d	W	Highway, B20	1 1/2	2500	4 1/2 x 5 1/2	34x5	36x6	W
Available, H2 1/2	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x8	W	Diamond-T, S	5	4800	4 1/2 x 6	36x6	40x6d	W	Highway, B20	1 1/2	2500	4 1/2 x 5 1/2	34x5	36x6	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x10	W	Diesel, A	1	.....	3 1/2 x 5	34x5	34x5	C	Highway, B20	1 1/2	2500	4 1/2 x 5 1/2	34x5	36x6	W
Available, H5	5	5575	4 1/2 x 6	36x6	40x12	W	Deane	2 1/2	4100	4 1/2 x 5 1/2	36x5	36x7	W	Highway, B20	1 1/2	2500	4 1/2 x 5 1/2	34x5	36x6	W
Available, H7	7	6875	5 x 6 1/2	36x6	40x14	D	Deane	3 1/2	5100	4 1/2 x 5 1/2	36x5	36x5d	C	Highway, B20	1 1/2	2500	4 1/2 x 5 1/2	34x5	36x6	W
Army	1	.....	3 x 4	34x5 1/2	34x5 1/2	I	Dodge Brothers	3 1/2	1085	3 1/2 x 4 1/2	32x4	32x4	B	Indep't (Iowa), E	1 1/2	2040	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Beck, A Jr.	1	1800	3 1/2 x 5	34x3 1/2	34x4	I	Dorris, K-4	2	3400	4 1/2 x 5 1/2	36x4	36x7	W	Indep't (Iowa), F	2	2495	4 1/2 x 5 1/2	34x4	34x6	I
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	I	Dorris, K-7	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x10	W	Indep't (Iowa), F	1 1/2	1885	3 1/2 x 5	34x3 1/2	34x4	W
Beck, O	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	I	Douglas, G	1 1/2	2050	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Indep't (Ohio), F	1 1/2	2770	3 1/2 x 5	34x3 1/2	34x5	W
Beck, E	1 1/2	.....	3 1/2 x 5 1/2	35x5	36x6	I	Douglas, H	2	2550	4 1/2 x 5 1/2	36x4	36x7	W	Indep't (Ohio), H	1 1/2	2520	4 1/2 x 5 1/2	36x4	36x4d	W
Belmont, A	1 1/2	.....	3 1/2 x 4 1/2	31x4	31x4	I	Douglas, I	3	3250	4 1/2 x 5 1/2	36x5	36x8	W	Indep't (Ohio), K	3 1/2	4605	4 1/2 x 5 1/2	36x5	36x5d	W
Belmont, B	1 1/2	.....	3 1/2 x 4 1/2	34x4 1/2	34x5	I	Duplex, Limited	1 1/2	2775	4 x 5 1/2	35x5 1/2	38x7 1/2	I	Indiana, 12	1 1/2	2290	3 1/2 x 5 1/2	34x3 1/2	34x5	W
Belmont, C	2	.....	4 1/2 x 5 1/2	36x4	36x7	I	Duplex, E	1 1/2	4250	4 1/2 x 5 1/2	36x8	36x8	I	Indiana, 20	2					

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
K-Z	1	\$2250	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Parker, F20	3 1/2	\$4400	4 1/2 x 6	36 x 5	40 x 6	W	Success, B	2 1/2	\$2850	4 1/2 x 5 1/2	34 x 4	36 x 7	W
K-Z	1 1/2	2750	3 1/2 x 5	36 x 4	36 x 6	W	Parker, M20	5	1785	4 1/2 x 6	36 x 6	40 x 6	W	Sullivan, F	1 1/2	2350	3 1/2 x 4 1/2	36 x 4	36 x 5	W
K-Z	2	3350	4 1/2 x 5 1/2	36 x 4	36 x 8	W	Piedmont, 4-30	1 1/2	3750	3 1/2 x 5	34 x 4	34 x 4	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36 x 4	36 x 7	W
K-Z	3 1/2	4250	4 1/2 x 5 1/2	36 x 5	40 x 10	W	Pier ce-Arrow	2 1/2	4950	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Sullivan, H	3 1/2	4650	4 1/2 x 6	36 x 5	36 x 5 1/2	W
K-Z	5	5200	4 1/2 x 5 1/2	36 x 6	40 x 6	W	Pier ce-Arrow	3 1/2	5700	4 1/2 x 5 1/2	36 x 5	40 x 6	W	Superior, D	1	1800	3 1/2 x 5	34 x 4 1/2	34 x 4	I
Lange, B	2	3000	4 1/2 x 5 1/2	36 x 4	36 x 6	C	Pier ce-Arrow	5	2190	4 1/2 x 5 1/2	36 x 3	36 x 5	W	Superior, E	2	2750	4 1/2 x 5 1/2	36 x 4	36 x 6	I
Larrabee, U	1 1/2	2400	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Pioneer, B	1	2990	3 1/2 x 5 1/2	36 x 3 1/2	36 x 6	W	Super Truck, 50	2 1/2	.....	4 x 6	36 x 4	36 x 8	W
Larrabee, K	2 1/2	3400	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Pioneer, F	1 1/2	3190	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Super Truck, 70	3 1/2	.....	4 1/2 x 6	36 x 5	40 x 5 1/2	W
Larrabee, L	3 1/2	4200	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Pioneer, N	2	4190	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Super Truck, 100	5	.....	4 1/2 x 6	36 x 5	40 x 6	W
Larrabee, W	5	5100	4 1/2 x 6	36 x 6	40 x 6	W	Pioneer, J	3 1/2	4990	4 1/2 x 5 1/2	36 x 6	40 x 6	W	Super Truck, 150	7 1/2	.....	5 x 6	36 x 6	40 x 7 1/2	W
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36 x 4	36 x 4	I	Pittsburgh, B	2 1/2	320	4 1/2 x 5 1/2	36 x 5	36 x 7	W	Texas, A38	3 1/2	.....	3 1/2 x 5	36 x 4	33 x 4	I
Lone Star	1 1/2	1745	3 1/2 x 5	34 x 4	34 x 5	W	Pony	1 1/2	4360	4 1/2 x 5 1/2	36 x 5	40 x 10	W	Texas, TK39	1 1/2	.....	3 1/2 x 5	36 x 6	38 x 7	W
Luedinghaus, K-S	2	2790	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Power, F	3 1/2	2150	3 1/2 x 5	35 x 5	35 x 5	W	Texas, TK	1 1/2	.....	3 1/2 x 5	36 x 6	38 x 7	W
Luedinghaus, KL	2 1/2	2890	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Power, C	1 1/2	4000	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Tiffin, GW	1 1/2	2895	4 1/2 x 5 1/2	36 x 5	36 x 6 1/2	W
Luedinghaus	1 1/2	2925	4 1/2 x 5 1/2	36 x 4	36 x 6	W	Rainier, R-11	3 1/2	4300	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36 x 5	36 x 6 1/2	W
Maccar, L	1 1/2	3750	4 1/2 x 5 1/2	36 x 4	36 x 4	W	Rainier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Tiffin, PW	3 1/2	4780	4 1/2 x 5 1/2	36 x 5	36 x 6 1/2	W
Maccar, H	3 1/2	4500	4 1/2 x 6	36 x 5	36 x 5 1/2	W	Rainier, R-19	1 1/2	2350	3 1/2 x 5	35 x 5	35 x 5	W	Tiffin, TW	5	5850	4 1/2 x 6	36 x 6	40 x 6	W
Maccar, M-2	5	5500	4 1/2 x 6	36 x 5	36 x 5 1/2	W	Rainier, R-16	6 1/2	2890	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Tiffin, UW	6	5550	4 1/2 x 6	36 x 6	40 x 12	W
Mack, AB	1 1/2	3150	4 x 5	36 x 4	36 x 3 1/2	D	Rainier, R-18	2	2950	4 1/2 x 5 1/2	36 x 4	36 x 6	W	Titan, Transport	3 1/2	4550	4 1/2 x 6	36 x 5	40 x 5 1/2	I
Mack, AB	3 1/2	3000	4 x 5	36 x 4	36 x 4	D	Ranger, TK-20-2	2	2575	3 1/2 x 5	34 x 3 1/2	34 x 5	W	Titan	6 1/2	5400	4 1/2 x 6	36 x 5	40 x 6	I
Mack, AB	5	3700	4 x 5	36 x 4	36 x 4	C	Reo, F	1 1/2	1385	4 1/2 x 5 1/2	34 x 4 1/2	34 x 4 1/2	B	Tower, J	1 1/2	3000	4 1/2 x 5 1/2	35 x 5	35 x 7	W
Mack, AC	2	3300	4 x 5	36 x 4	36 x 4	C	Reliance, 10A	1 1/2	1500	4 x 5 1/2	36 x 3 1/2	36 x 5	I	Tower, H	2 1/2	3475	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Mack, AC	3 1/2	4050	5 x 6	36 x 5	40 x 6	C	Reliance, 10B	2 1/2	2825	4 x 5 1/2	36 x 3 1/2	36 x 5	I	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36 x 5	36 x 7	W
Mack, AC	5	5500	5 x 6	36 x 6	40 x 6	C	Reliance, 20C	2 1/2	3200	4 1/2 x 5 1/2	36 x 4	36 x 4	I	Traffic, C	2	1950	3 1/2 x 5	34 x 3 1/2	34 x 5	I
Mack, AC	7 1/2	6000	5 x 6	36 x 7	40 x 12	C	Reliance, 20B	2 1/2	3675	4 1/2 x 5 1/2	36 x 4	36 x 4	I	Transport, 20	1 1/2	1850	3 1/2 x 5	34 x 3 1/2	34 x 5	I
Mack Trac, AB	5	3100	1 x 5	36 x 4	36 x 4	C	Republic, 10	1	1635	3 1/2 x 5	34 x 3	34 x 4	I	Transport, 30	2 1/2	2785	4 1/2 x 5 1/2	36 x 4	36 x 7	I
Mack Trac, AC	7	4350	5 x 6	36 x 5	40 x 5 1/2	C	Republic, 11X	1 1/2	2195	3 1/2 x 5	34 x 3 1/2	34 x 5	I	Transport, 50	3 1/2	4195	4 1/2 x 5 1/2	36 x 5	36 x 7	I
Mack Trac, AC	10	5500	5 x 6	36 x 6	40 x 6	C	Republic, 19	2 1/2	2795	4 1/2 x 5 1/2	36 x 5	36 x 7	I	Transport, 70	1 1/2	2075	4 1/2 x 5 1/2	36 x 4	36 x 10	I
Mack Trac, AC	13	5750	5 x 6	36 x 6	40 x 12	C	Republic, 20	3 1/2	3445	4 1/2 x 5 1/2	36 x 5	36 x 10	I	Traylor, B	1 1/2	2875	4 1/2 x 5 1/2	36 x 4	36 x 7	W
Mack Trac, AC	15	6000	5 x 6	36 x 7	40 x 12	C	Riker, B	3	4600	4 1/2 x 6	36 x 5	36 x 5 1/2	W	Traylor, C	2	3375	4 1/2 x 5 1/2	36 x 4	36 x 9	W
Master, JW	1 1/2	2690	4 1/2 x 5 1/2	34 x 3 1/2	34 x 5	W	Riker, BB	4	4700	4 1/2 x 6	36 x 5	36 x 6	W	Traylor, D	3	3750	4 1/2 x 5 1/2	36 x 5	36 x 9	W
Master, W	2 1/2	3290	4 1/2 x 5 1/2	34 x 4	36 x 7	W	Rock Falls, 9	1 1/2	2800	3 1/2 x 5 1/2	35 x 5	35 x 5	B	Triangle, AA	4 1/2	1600	3 1/2 x 5	35 x 5 1/2	35 x 5 1/2	I
Master, D	2 1/2	3540	4 1/2 x 5 1/2	34 x 4	36 x 7	W	Rove, CW	1 1/2	4530	4 1/2 x 6	36 x 5	36 x 6	W	Triangle, A	1 1/2	2500	3 1/2 x 5 1/2	34 x 3 1/2	34 x 4	I
Master, A	3 1/2	4190	4 1/2 x 6	36 x 5	40 x 5 1/2	D	Rove, HW	4	4530	4 1/2 x 6	36 x 5	36 x 6	W	Triangle, B	2 1/2	2700	3 1/2 x 5 1/2	34 x 4	36 x 6	I
Master, E	3 1/2	4940	4 1/2 x 6	36 x 6	40 x 6	D	Rowe, C.D.W.	2	3300	4 x 5	34 x 4	36 x 3 1/2	W	Triangle, C	2 1/2	2950	4 x 5 1/2	36 x 4	36 x 7	I
Master, F	5	5290	4 1/2 x 6	36 x 6	40 x 6	D	Rows, G.S.W.	3	4150	4 x 6	34 x 5	36 x 5 1/2	W	Triumph	1 1/2	2400	3 1/2 x 5 1/2	36 x 3 1/2	36 x 5	W
Master, T	6	3740	4 1/2 x 6	36 x 4	36 x 4	D	Rows, G.P.W.	3	5230	3 1/2 x 5 1/2	36 x 7	42 x 9	W	Triumph, HB	2	2070	3 1/2 x 5 1/2	36 x 4	36 x 7	W
Maxwell, 1 1/2	1 1/2	1332	3 1/2 x 4 1/2	32 x 3	32 x 4	W	Rewe, F.W.	5	5500	4 1/2 x 6	36 x 6	40 x 6	W	Twin City, B	3 1/2	4750	5 1/2 x 6	36 x 6	36 x 6	I
Menominee, HT	1 1/2	2090	3 1/2 x 5	34 x 3 1/2	36 x 5	W	Rumely	1 1/2	865	3 1/2 x 5 1/2	36 x 3 1/2	36 x 5	W	Twin City, A	5	5230	5 1/2 x 6	36 x 7	36 x 7	I
Menominee, H	1 1/2	2725	4 x 5	36 x 4	36 x 5	W	Samson, 15	3 1/2	1135	3 1/2 x 5	35 x 5	35 x 5	B	Ultimate, A	2	3200	4 x 5 1/2	36 x 3 1/2	36 x 5	W
Menominee, J	2	3245	4 x 6	36 x 4	36 x 4	W	Samson, 25	1 1/2	2195	3 1/2 x 5	36 x 4 1/2	34 x 5	W	Ultimate, AJ	2	3150	4 1/2 x 5 1/2	35 x 5 1/2	36 x 5	W
Menominee, J	3 1/2	4270	4 1/2 x 6	36 x 5	36 x 5 1/2	W	Sandow, G	2	2575	3 1/2 x 5	36 x 4	36 x 6	W	Ultimate, B & BL	2 1/2	3750	4 1/2 x 5 1/2	36 x 4	36 x 4 1/2	W
Menominee, J	5	5150	4 1/2 x 6	36 x 6	40 x 6	W	Sandow, I	1 1/2	2190	3 1/2 x 5	36 x 4	36 x 6	W	Union, F	2 1/2	3150	4 x 6	36 x 5	36 x 8	I
Moline, 1	1 1/2	2250	3 x 5	31 x 5 1/2	36 x 6	W	Sandow, CG	1 1/2	3175	4 1/2 x 5 1/2	36 x 4	36 x 7	W	Union, H	4	3975	4 1/2 x 6	36 x 6	36 x 10	I
Moreland, 20N	1 1/2	2850	3 1/2 x 5	35 x 5 1/2	36 x 6	W	Sandow, J	2 1/2	3195	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	Union, J	6	5400	5 x 6	36 x 6	40 x 14	I
Moreland, 20B	1 1/2	325	3 1/2 x 5	35 x 5 1/2	36 x 6	W	Sandow, M	2 1/2	3175	4 1/2 x 5 1/2	36 x 5	36 x 5 1/2	W	United, A	1 1/2	2445	3 1/2 x 5 1/2	36 x 3 1/2	34 x 5	I
Moreland, 20C	2	3000	4 1/2 x 5 1/2	36 x 4	36 x 8	W	Sandow, N	2 1/2	3175	4 1/										

MOTOR WORLD

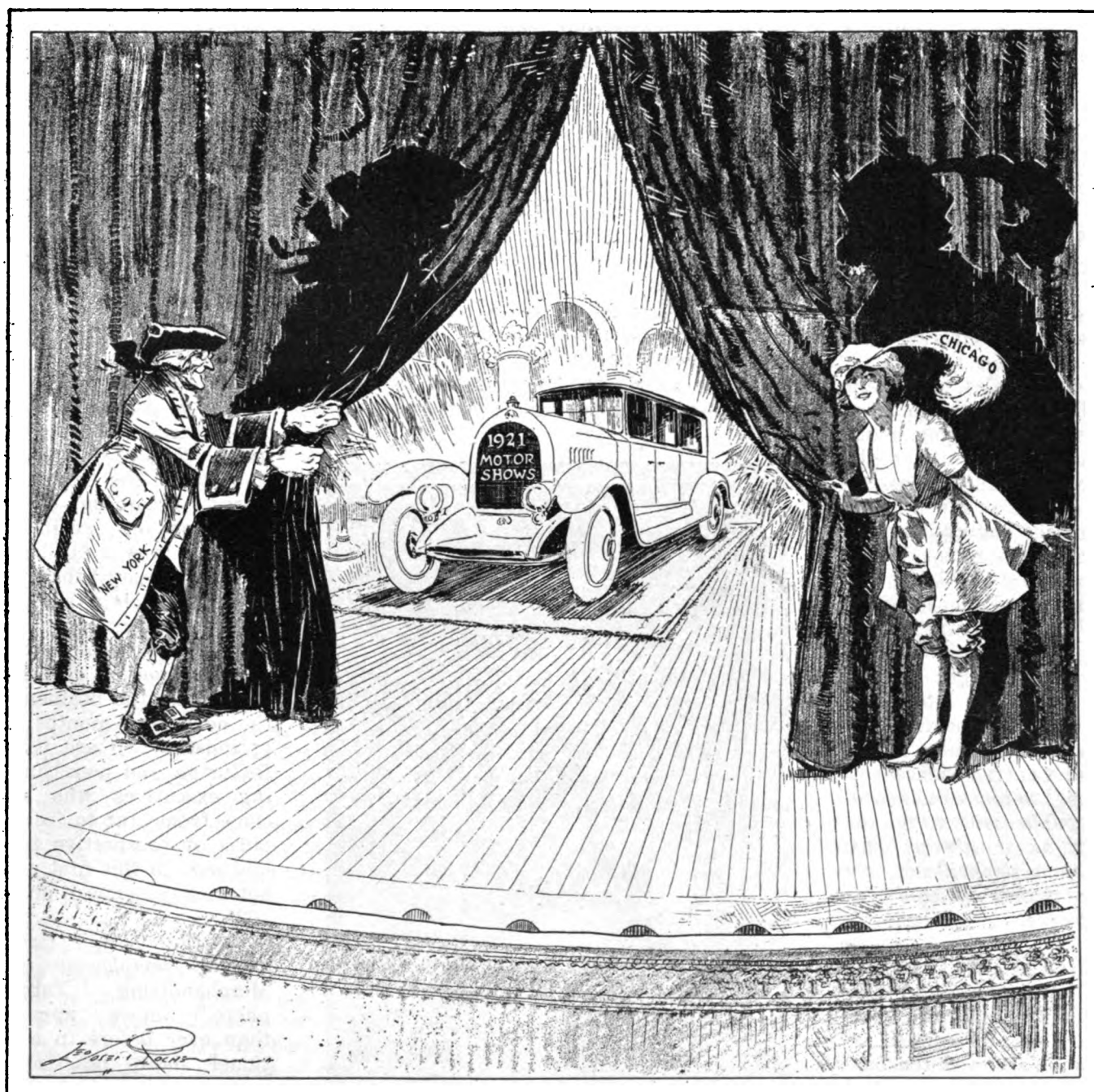
for
DEALERS, JOBBERS AND GARAGEMEN

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No. 2

The Return of Business: Act I



New York Show Indicates

RETURN OF BUYING

Attendance and Inquiries Give Evidence That Public Is Getting Tired of Waiting and Is Ready to Proceed with Replacement and Extension of Transportation Facilities—Notable Progress Seen in Making Cars More Salable and Serviceable—Manufacturers and Dealers Perfect New Plans to Sell

By NEAL G. ADAIR

THE public has given its first indication on a broad scale of its intention to resume the buying of automobiles. When the doors closed to-night on the opening day of the twenty-first New York Motor Car Show there was encouraging evidence that the show has not lost its potency as an agency of sales promotion and that the people are yielding in their stand against buying—yielding because they have gone about as far as they can go without replacement and extension of the prime utilities of present day civilization, among them motor transportation.

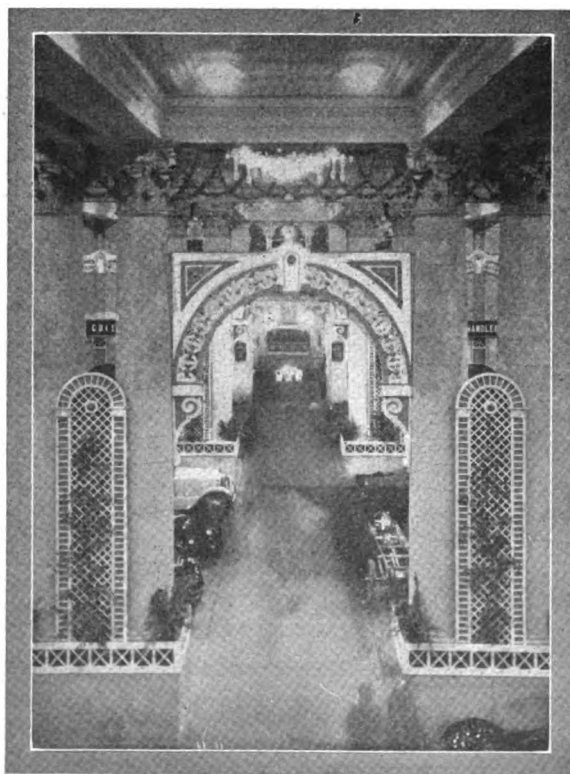
Final judgment of a show by its opening day of course is impractical, but during the eight and a half hours that intervened between the opening and closing of the gates at the Grand Central Palace two things were established. *The public will go to the show, as it always has. And the aisles will not be a mere parade ground for sightseers.*

THERE was the familiar gossipy, expectant crowd at the gates before the red-coated attendants removed the barriers at 2 p. m. And throughout the afternoon and evening the aisles were

thronged—not packed with humanity as they were a year ago when people were clamoring for cars that dealers couldn't supply but filled with a crowd that compared well with those of two and three and five years back. *And there was business for the exhibitors. Some spontaneous sales were made and the majority of exhibits were filled with men and women who asked earnest and intelligent questions about cars, gave salesmen their names as prospects and in many cases stated definite dates when they expected to buy.* The afternoon crowd, according to the consensus of exhibitors' opinions, was a far better "business" crowd than usually comes to the show on Saturday afternoons.

New York dealers, who are counting on the show to forecast the business of the next three months, are optimistic. So are manufacturing and merchandising executives who have come from afar to feel the pulse of prospective trade laid bare in this first great automotive exposition of 1921.

But there is no optimism of the complacent type. Merchandising "atmosphere," more apparent than ever before in a national show, practice of salesmanship, which fairly "sticks out" of some of the exhibits, and plans for



LOOKING DOWN THE MAIN AISLE AT
THE NEW YORK SHOW

a week of manufacturer-dealer get-going-again meetings testify to an acknowledgment on everybody's part that the public, even if it appears to be yielding in its won't-buy attitude, is not going to come back spontaneously—it *will have to be sold back*. There is no complacency. You don't find it in manufacturers or merchandisers. But there is something else that the observer senses rather than sees. It is an unmistakable revival of the thinking, doing spirit, that has brought the automobile industry to greatness in half a generation, the spirit that is going to place the automobile, as it was after the armistice, at the head of the procession which, for lack of a better name, we may call the return of buying.

THE show reveals the industry more alert than it ever has been to the public's wants. The dealer, who knows the public as the manufacturer never can know it, has been listened to and the show

shines with efforts to please. For one thing, there is color, not merely a few "show jobs" here and there but choices of color in standard production in greater variety than has been the rule. Quite a few makers who offered only blacks, blue-blacks and green-blacks have real blues and greens and perhaps maroons alongside the blacks on their standard lists, recognizing the precious privilege of man to be different than his neighbor, and salesmen are making much of this latitude in their "immediate delivery" talks.

Veterans in show attendance find the exposition the brightest in recent national show history and there are not a few exhibits that attain the height of brilliance in the presentation of special paint jobs and in artistic contrasting of colors.

Then, not so spectacular as the colorings, but even more important to the future of sales, is the improvement in assembly and inspection. All through the show the careful observer notes a sort of climax in the thing the industry has been talking about for several months—the evidences of painstaking workmanship in putting cars together. This is apparent in mechanical assembly and in the paint and upholstery

work, which bears the earmarks of intelligent care.

There are some improvements tending toward economy of operation and some toward greater accessibility as facilitating serviceability, all adding to the salability of the cars.

Public demand is also recognized in the trend, even more evident than a year ago, toward the enclosed car and toward the "small family" conveyance. While enclosed cars displayed number only one more

than a year ago, 120 to 119, the open models have dropped from 176 to 163. In the open car field there are 91 4-5 passenger models to 40 of the 2-3 and 32 of the 6-7 type. In the enclosed car exhibits the figures stand 80 on the 4-5 passenger, 23 on the 2-3 and 27 on the 6-7. Though there is a movement, as exhibited by several makers, to broaden the buyer's selection privileges in engines, the year's great gain is for the 4-cylinder type, of which 80 are shown as compared with 65

in 1920. Six-cylinder engines are ten fewer, eights two more, and twelves four fewer than a year ago, the latter appearing in only three chassis.

IN addition to the color at the show, seen in the striking, yet dignified red and green decorative scheme and in some "show cars," there are a number of notable merchandising exhibits which are proving magnets for business. Marmon has its complete line in miniature models mounted on pedestals and General Electric has three miniature garages, one for general service work, one for battery work and one for car owners, fully equipped with models of the company's products. Both these exhibits are drawing the attention of the public and the trade.

Use of the show as a get-set vehicle for the year's work is being undertaken by most of the manufacturers and New York distributors, who report hundreds of dealers coming in for merchandising meetings. Dodge expects to have fully 1000 dealers in conference and Marmon has set up a "dealer opportunities" department at the New York sales headquarters, where dealers will be assisted in analyzing the sales

Statistical Picture of Nine New York Shows

EXHIBITORS										
	1913	1914	1915	1916	1917	1918	1919	1920	1921	
Total exhibitors	424	349	317	319	323	331	198	307	307	
Gasoline	..	..	..	..	..	..	..	..	83	
Electric	..	..	..	..	..	..	..	..	3	
Accessory exhibitors	320	259	223	306	227	252	141	225	221	
Cars exhibited	276	269	228	284	282	283	225	334	341	
Gasoline	226	265	221	251	272	252	223	324	334	
Electric	10	4	7	13	10	11	2	8	7	
Steam	..	..	..	..	2	4	..	2	1	
Stripped chassis exhibited	49	37	51	56	54	34	..	..	38	
Four-wheel brake	..	..	..	..	..	..	..	..	1	
ENGINE CHARACTERISTICS—Gasoline Cars										
Two-cylinder	..	2	..	..	..	..	..	..	..
Four-cylinder	229	183	146	158	146	94	40	65	80	
Six-cylinder	133	131	160	154	161	171	141	223	213	
Eight-cylinder	..	..	8	50	55	40	34	29	31	
Twelve-cylinder	..	..	..	17	16	9	8	7	3	
Air-cooled	5	6	3	3	..	..	..	..	7	
Water-cooled	261	258	218	248	..	..	..	..	325	
Tappet valve	215	254	213	247	270	252	..	..	321	
Sleeve valve	10	10	6	15	2	..	..	..	12	
Revolving disk valve	..	..	..	..	..	..	..	..	1	
Valve-in-head	..	..	..	..	..	..	..	..	119	
L-head	..	..	..	..	..	..	..	..	180	
T-head	..	..	..	..	..	..	..	..	29	
BODY STYLES—Gasoline Cars										
Open cars	213	195	175	194	195	175	127	176	163	
Roadsters, 2-3 passenger	52	51	51	76	68	40	..	..	40	
Touring cars, 4-5 passenger	164	145	129	125	140	143	..	..	91	
Touring cars, 6-7 passenger	164	145	129	125	140	143	..	..	32	
Enclosed cars	53	43	36	28	37	77	79	119	120	
Coupees, 2-3 passenger	19	17	7	6	6	13	..	..	23	
Sedans, 4-5 passenger	2	2	3	2	..	43	..	..	80	
Other closed 6-7 passenger	23	16	19	14	19	8	..	..	27	
WHEEL STYLES—Gasoline and Electric Cars										
Wire wheels	..	..	..	..	..	..	..	..	70	
Disk wheels	..	..	..	..	..	..	..	..	56	
Artillery wheels	..	..	..	..	..	..	..	..	215	

possibilities of their territories and mapping out business-getting campaigns.

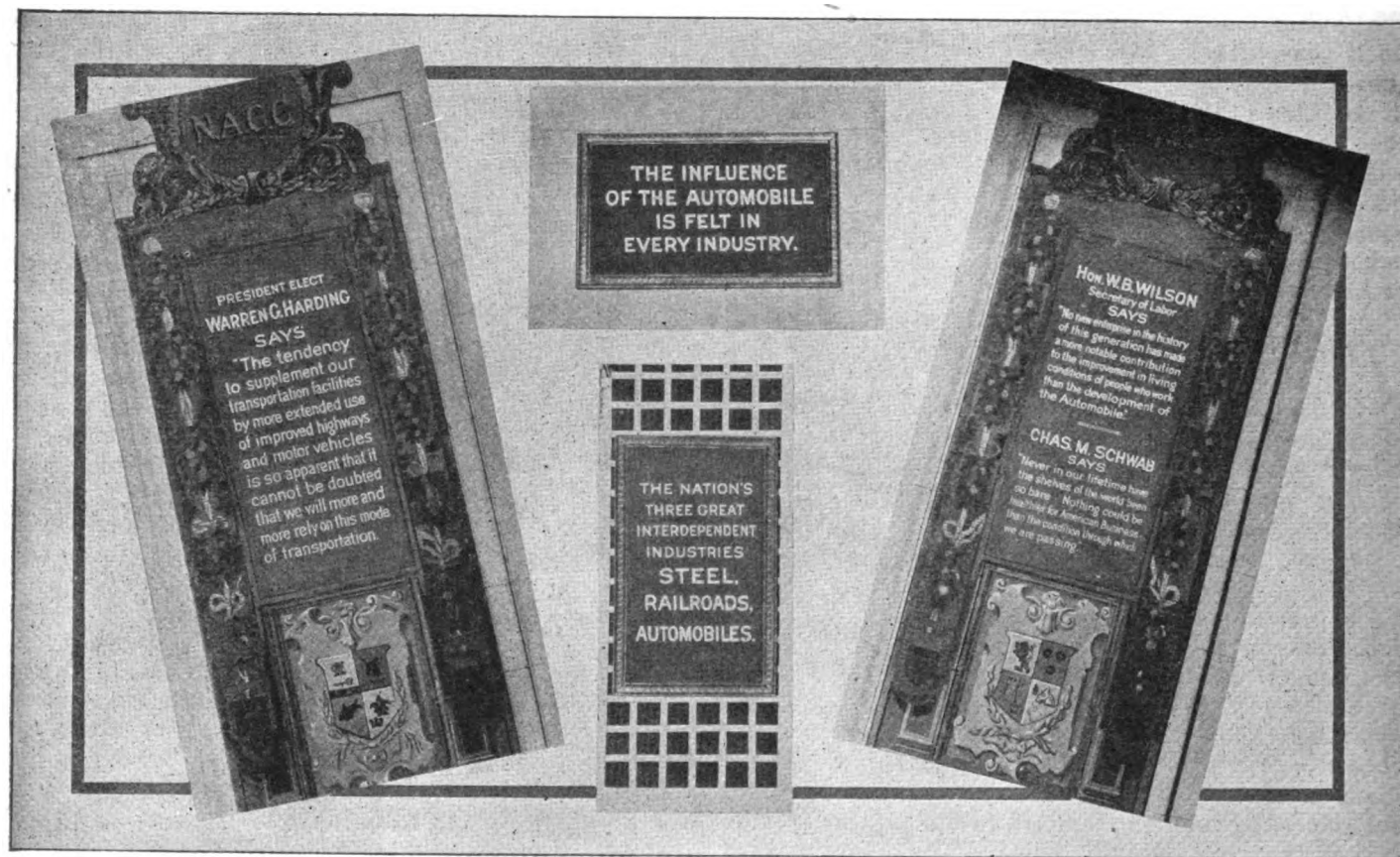
ALL of which takes us through the show, as a show.

As to future business, not only in New York but throughout the country, because what happens in New York is a fair criterion of general conditions, there is every indication that work will get business and that the shows will help materially in breaking the "buyers' strike." *In the metropolis there has been since New Year's a noticeable increase in visitors to passenger car salesrooms and in inquiries for used*

PROSPECTIVE purchasers apparently are less interested in the subject of prices than they are in quality, workmanship and satisfactory service. Salesmen at the show are not often called upon to undergo heckling about how much their cars cost or what the prospects are for reductions. It is becoming apparent that while there is a general downward trend of prices for commodities which make up the everyday budget, persons who own motor cars or who hope to own them will not be deterred from purchasing the car they want by a few dollars more or less.

As a matter of fact, factory representatives and

"The Spirit of the Shows"

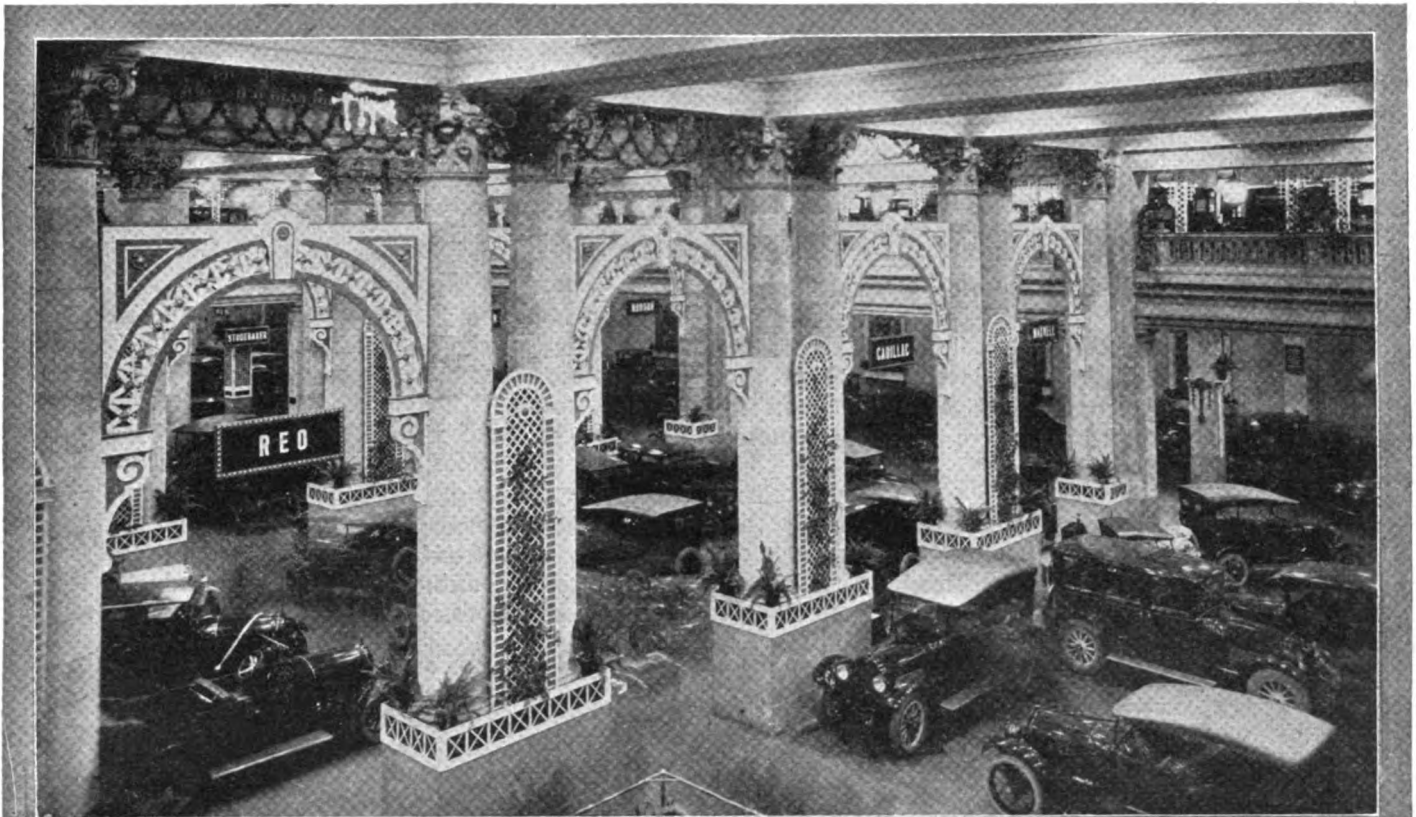


The motor car as a utility was sold in the New York Show this year with strikingly effective wall panels done in green with white lettering. These messages carried the spirit of the show and sold the motor car industry as a potent factor in the development of the industrial and commercial fabric of the country. Above are a few of the several dozen panels

cars. The renewed interest in used cars in one of the most encouraging signs of the times when it is realized that used car sales have been nil and inquiries almost as much a minus quantity during the past two months. The New York public was talking automobiles again before the show, was buying some, particularly of the lower priced makes. And now comes the show. It is not illogical to presume that the interest which had taken on new life without stimulation will become at least reasonably robust during the show and that the sales made and prospects listed will furnish a real impetus for a growing volume of winter and spring business. This is the reasonable opinion of branch managers and distributors.

dealers appear to be more interested in prices than do the public. The expectation has become more or less general in the trade that drastic changes downward would be announced at the opening of the show. This belief was not well founded. Quite a number of price changes were announced but there were fully as many which moved up as there were down. In cases where price schedules were raised, they generally were accompanied by new models or by refinements in the old models, which made them more attractive and which justified the additional cost to the purchaser. Companies which guaranteed their prices are standing pat and in several cases the belief is expressed that the guarantees will be extended. In a

Dignity and Beauty in the New York Show



few instances, however, it is expected reductions will be announced when the guarantees expire.

PRODUCTION schedules in any factories, large or small, whether located in the Detroit zone or out in the "sticks," depend entirely upon developments in the next few weeks, and, to a considerable extent, on buying tendencies evinced at the show here. Not a factory representative at the New York exhibit could proclaim anything definite in the line of a schedule as the show opened.

Sales managers are a unit in the opinion that production for some time will be entirely on a sales basis. This was emphasized particularly in the higher-priced cars.

This condition, sales heads are agreed, would bring upon the factories the necessity of getting six months' normal production rushed through in three months. To forestall this the developments of the show and the general attitude of the public will be scrutinized closely in an attempt to meet the demand at all times with instant deliveries.

IN the automotive equipment field particularly the show provides indications of an early return of volume buying. The exhibits are drawing the usual crowd of car owners, but with them are many dealers and garagemen who are frank in admitting the

scantiness of their stocks. Jobbers in good numbers have booked hotel rooms for the week. One manufacturer who has made an investigation in a dozen cities finds that jobbers have been "swapping" stocks for the past two or three months, thus staying actively in business without spending much money. Now they are down almost to empty warehouses and they will have to buy to meet the early spring demand. It is significant that virtually no jobbers have been in financial difficulty. This great branch of the system of equipment distribution is alive and hearty and ready to do its part in bringing about a return of buying.

***W**HAT is happening' at the New York Show, what is happening in manufacturers' and distributors' headquarters during show week, what is going to happen at other shows and other show meetings as the season progresses is going to put the industry where it belongs—AT THE ACTIVE INSTEAD OF THE PASSIVE END OF THE PROCESS OF MARKETING AUTOMOBILES. From the factory sales manager all the way through to the dealer's salesman the industry is learning that *selling will sell, and that with selling is coming in real volume the return of buying.* And in this rebirth will be business and profits for everybody who helps to bring it about.*

Six New Cars and Six New Chassis

At New York Show and Hotels

New Body Models Show Effort of Makers to Meet Public Demand for Comfort, Convenience and Wide Range of Styles—Chassis Changes Also Aimed to Meet Dealers' and Buyers' Wishes

By J. HOWARD PILE

WHILE there is only one really new car at the show, the Friend, the hotels house exhibits of several newcomers in the passenger car field, these being Navarre, Kenworthy, Northway, Ace and Parenti. A total of six really new chassis is to be credited to R & V Knight, Jackson, Oldsmobile and Fiat.

It was not expected that there would be any great number of new chassis or chassis models because there is no

reason for it. The design of most of the cars has been brought up to date as far as engineering practice has advanced and until some new thought is brought to light there can be no radical change.

The great number of new and changed body models, however, show clearly the desire on the part of the manufacturers to satisfy the public demand for comfort, convenience and a wide range of styles to cover vary-

ing tastes. For the most part the new body models are of the enclosed type. Some of them replace other enclosed models which have been found unsatisfactory for one reason or another, and in some cases the enclosed models are added to newer lines which up to the present time have not had an opportunity to get beyond the open car stage.

There are many minor refinements in the enclosed jobs which could only

be thoroughly covered by a repetition of trivial details, yet all these changes make for more comfort or convenience or for longer life.

Where new chassis have been added to a line, the idea in general is to complete the line by the addition of a chassis with a different number of cylinders. Some years back, makers decided on a four or a six, and then tried to convince the prospect that the four or the six was the only thing worth buying. Now the idea seems to be to round out the lines and give the customer the option and let him use his personal judgment in the matter of the number of cylinders.

The great variety of color shown on the bodies is striking and unlike former years. Most of these colors can be had in stock jobs without extra charge.

Enclosed cars, in spite of their higher price, continue to command a great deal of interest, there being 120 enclosed to 163 open jobs. Last year there were 119 enclosed jobs to 176 open jobs. Last year was the first show at which enclosed jobs were really featured, the 1917 show having less than 40.

The winter top, which took quite a hold on the public fancy and which was fostered by the manufacturers, has practically gone out of existence. Many of the open models have California tops varying over a wide range from those that simply have the space back of the bow filled in, to those with the complete California top with glass doors.

There is nothing much new in the line of better carburetion devices. Some changes have been made in the arrangement of the hot air intakes and some of the hot-spot designs have been altered, but the fuel economy feature is not being given the prominence that it had last year.

There is a noticeable increase in the number of cars now regularly equipped with cord tires without extra cost and it is possible that more manufacturers, after seeing the other cars at the show, will also come into line.

In addition to the changes and new models here described, there are several models that have been out two or three months and which the public at large had not had an opportunity to see at an exhibition. These include the 1921 Buick, Lexington Model T with Ansted engine, Oldsmobile 43-A, Packard single six, Paige-Detroit big six and the new Pierce-Arrow, all of which have been described in Motor World.

Navarre a Schulz Product

The Navarre is the design of A. C. Schulz, formerly an engineer with the Locomobile and Mercer companies. Only one model of the Navarre, an experimental 5-passenger touring car model, built at

the Package Machinery Co., Springfield, Mass., is on exhibition. Associated with Mr. Schulz is A. T. Murray, president of The American-Bosch Magneto Co., Springfield, Mass., who will form a company for the production of the car in a factory to be located in Springfield. Mr. Schulz intends to produce two models, an open touring car in several body designs, to sell between \$4500 and \$5000, and a two-compartment sedan such as shown at the show, to sell in the neighborhood of \$6000. Both models will have 131-in. wheelbases with the special Schulz en-

cylinder Duesenberg racing engine sells at \$4585.

The Kenworthy line is being distributed by the Kenworthy Motors of New England, which have the entire output of the Kenworthy Motors Corp., Mishawaka, Ind.

The eight-cylinder-in-line model is further characterized by the use of front wheel brakes. The engine is in a unit powerplant with a special Brown-Lipe clutch and gearset and a heavy Columbia rear axle. This model comes in a 130-in. wheelbase. Regular equipment includes

The New Cars of 1921

AT THE HOTELS		
CAR	MODEL	PRICE
Navarre	5-passenger touring and sedan.....	(Not announced)
Northway	7-passenger touring	\$4,200
	2-passenger roadster	4,200
	Sedan	5,200
Ace	Touring .....	.....
	Roadster .....	.....
Parenti	Touring	2,000
	Sedan	3,000
AT THE SHOW		
Friend	Roadster	1,585
	Touring	1,585
	Coupe	2,485
	Sedan	2,585
NEW MODELS		
R. & V. Knight, 4-cylinder.....	Touring	2,150
	Sedan	3,150
Jackson, 4-cylinder (Also coupe, sedan and roadster).....	Touring	11,445
Oldsmobile, 8-cylinder	Touring	(Not announced)
Flat	Model 501*	2,100
	Model 505*	2,300
	Model 510*	4,100
NEW BODY MODELS		
Templar	3-passenger coupe .....	.....
Anderson	2-passenger speedster	2,195
Kiesel	Coach sedan .....	.....
	Tourster .....	.....
	Speedster .....	.....
Davis	Special roadster	2,150
Westcott	Coupe	3,390
Elgin	Coupe	2,685
Monroe	Coupe	2,500
	Sedan	2,500
Malbohm	Coupe	2,385
Allen	Roadster	1,595
Mitchell	7-passenger .....	.....
	4-passenger sport model .....	.....
Velle	7-passenger .....	.....
Columbia	5-passenger touring	1,995
Lexington	4-passenger sedanette	4,400
	5-passenger sedanette	4,500
Dixie Flyer	Speedster	1,885
Hansen	Sedan	3,165
American	4-passenger sport	2,550
Sayers	Derby roadster	2,595

*Chassis only. †Approximate.

gine, a six-cylinder job with cylinders $3\frac{1}{4} \times 5\frac{1}{4}$ with overhead valves. The Schulz engine is characterized by its very clean exterior, and by a full pressure lubricating system. Underslung rear springs; adjustable spring shackles; 7 in. section frames; Hotchkiss drive and unit powerplants are included in the design of the new models.

Kenworthy a New "8"

The Kenworthy line, which is offered in three different models, is featured by the use of a new eight-cylinder-in-line engine in roadster and touring models to sell at \$5000. Another model with a six-cylinder Continental engine sells at \$3785 and a special sport model with a four-

Philbrin ignition; a two-compartment gasoline tank; front and wheel bumpers; trunk rack; two spotlights and two tail lights.

Northway a New "6"

The new Northway line, made by the Northway Motors Corp., Natick, Mass., is shown in two models, a two-passenger roadster and a seven-passenger touring car.

The Northway, for the present, is being furnished in touring car and roadster bodies at \$4200 and sedan \$5200. The engine is a Northway six-cylinder overhead valve unit with a bore of $3\frac{1}{4}$ in. and stroke of $5\frac{1}{4}$ in. The cylinders are block cast and cooling is by a centri-

fugal pump. The cylinder head is detachable. Lubrication is by pressure feed to the crankshaft, bearings and overhead valve mechanism. The cylinders are lubricated by splash from the connecting rods. The radiator has a Liberty silver shell and copper core.

Clutch and gearset are of Brown-Lipe manufacture, the former being of the multiple disk type with Raybestos facings and the latter providing three speeds forward and one reverse. Clutch and gearset are a unit with the engine.

The frame is of the rigid type with 6 in. side sections and cross members at the extreme front and rear with reinforcements to eliminate side sway and whip. The drive is full Hotchkiss with extra heavy flexible universals. Both front and rear axles are Columbias, the rear being full floating spiral bevel type employing a pressed steel load-carrying member. The gears are of the spiral bevel type and are case hardened. The gasoline is carried in a 21-gal. tank on the rear and fed by a vacuum system to the carbureter.

On the touring and roadster models the final gear ratio is 4.1 to 1 and on the sedan 4.4 to 1. Equipment includes speedometer, gasoline primer, Alemite lubrication system, eight day clock, power-driven tire pump, gasoline tank gage and other conventional equipment.

Parenti Air Cooled Car

The new Parenti air cooled car is exhibited at the Hotel Commodore. This 1921 model shows several original features, prominent among which is the flexible rear axle which is formed from the springs. A new departure in frame and body design is also used, the body and frame being one unit. The frame consists of two panels of 5-ply plywood, each being 12 in. wide and $\frac{3}{4}$ in. thick, running the entire length of the body. Pillars of spruce or ash are glued and screwed to this frame at intervals giving each pillar an anchorage of 12 in. on the frame. Cross members of 5-ply plywood extend across the body and joins each pair of pillars right and left. Panels of 3-ply plywood are screwed and glued

both inside and outside this skeleton framework, giving a solid body and frame unit, which weighs less than 300 lbs.

With the extremely light construction it is necessary to make radical changes in the spring suspension. The rear axle

from wheel hanger to wheel hanger, and are carried on the spring hangers. The pressed steel tierods each have a bearing at one end on a spring hanger and at the other on a wheel hanger, holding the wheels in alignment and compelling them to rise and fall vertically. Inasmuch as springs tend to lengthen as they flatten out, their outer ends are coiled around eccentric bronze bushings in the wheel hangers and as the wheels rise these bushings are forced to turn inasmuch as their centers are held stationary by the tierods. This prevents the wheels from spreading and also prevents the springs from cramping. The springs therefore form flexible axles.

The rear axle employs the same principle as the front axle. Three springs take the place of two in front and are arranged in a triangular position, one at the top and two at the bottom. The two lower springs carry light loads over normal roads, under which condition the top spring is idle. This top spring comes into action only when going over rough roads. The differential gear, brakes and drive shaft are carried on the body as sprung weight, being attached to the four spring hangers and thus retain a fixed relation to the engine.

An innovation is shown in the steering gear arrangement by means of which both wheels are directly turned by the gear instead of as in the conventional design where one wheel is turned and the other turned from this through a tie rod.

Full mechanical details of the engine are not yet available, but it is 8-cylinder air cooled, has a Zenith carbureter, vacuum fuel feed, Connecticut ignition, Bijur starting and lighting, Borg & Beck clutch and other standard parts.

The touring car is \$2000 and the Sedan \$3000.

Friend a Newcomer

The Friend car is exhibited with roadster, touring and coupe bodies. This car has a 4-cylinder, $3\frac{1}{4} \times 4\frac{1}{2}$ -in. engine, 112-in. wheelbase and 32 x $3\frac{1}{2}$ tires. Prices are as follows: roadster, \$1,585; touring, \$1,585; coupe, \$2,485; sedan, \$2,585.

Car Price Revisions and Prices on New Models in Effect at New York Show

REDUCTIONS

Peerless—4-pass., \$3,230 to \$2,990; roadster, \$3,200 to \$2,990.

Jackson—\$200 on all models except new 4-pass.

Auburn—\$200 on all models.

Davis—\$200 to \$290 on open cars; \$390 on enclosed.

INCREASES

Franklin—\$100 on open cars, Jan. 1; \$100 on enclosed cars, Jan. 15.

Dort—\$130 on new touring and roadster models.

Velie—\$325 on new model 48 sedan at once; \$100 on new model 34 touring, Feb. 15.

Moon—\$200 model 6-68, \$2,685; 6-48, \$2,185; enclosed, \$3,185. (Moon previously cut \$400.)

NEW MODELS

Saxon-Duplex—\$1,675 on open models; \$2,475 on enclosed. This represents a reduction of \$220 on former open models, and \$320 on former enclosed.

Columbia—5-pass. touring, \$1,995; coupe, \$2,895.

Haynes—5-pass. touring, \$1,985.

Mitchell—5-pass. touring, \$1,995.

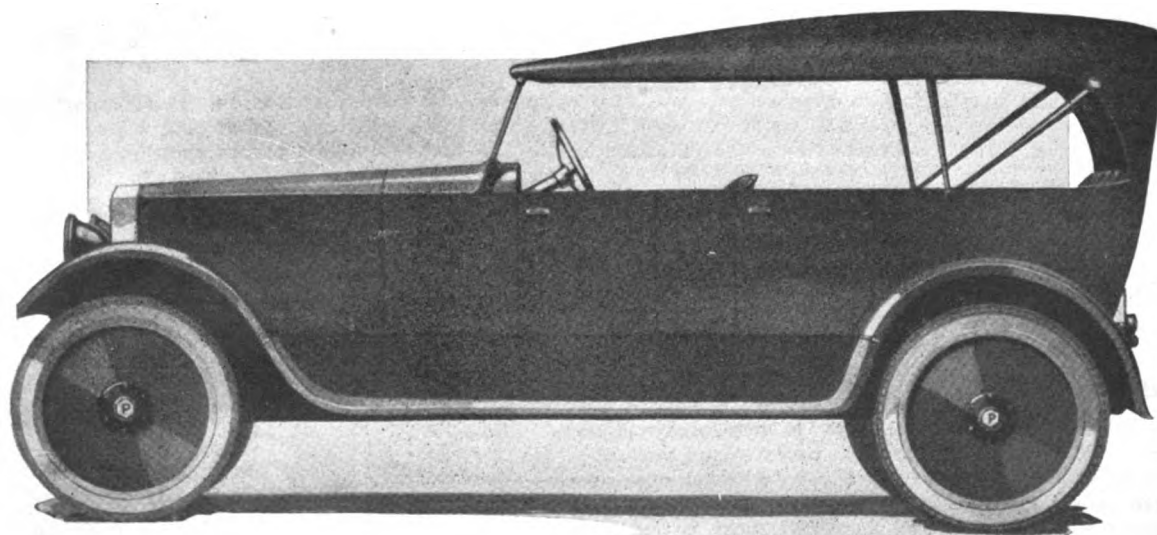
Maibohm—Coupe, \$2,395.

Detroit-Electric—Brougham, \$4,000.

Pilot—5-pass. touring, \$2,285.

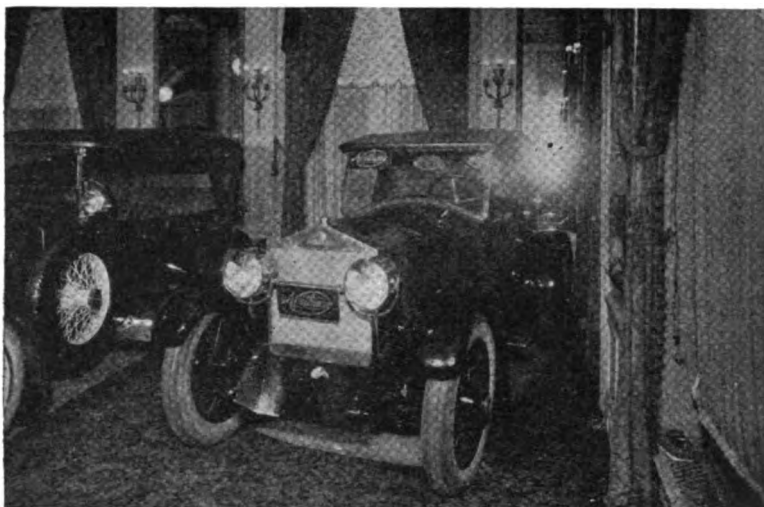
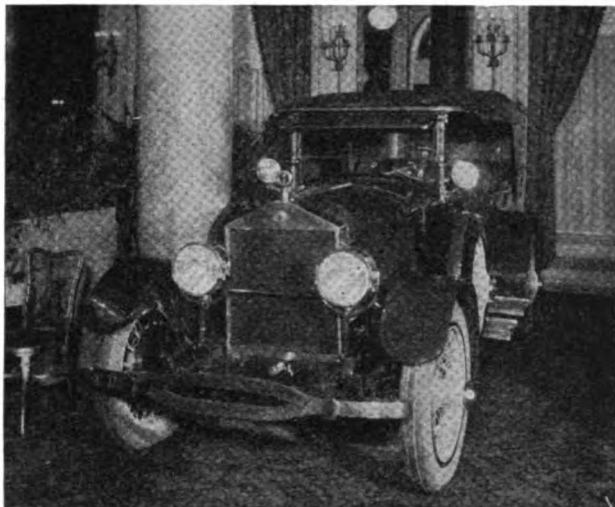
An increase of \$200 was practically effected by Dorris through elimination of extra equipment, though refinements were added in construction.

has therefore been especially designed to take care of this feature. The springs, which are of the high vibratory type, extend clear across the front of the car,



The Parenti

A new car with air-cooled engine, and radical rear end construction. The touring model is priced at \$2,000



New Cars Shown at Hotels

The Kenworthy Line-O-Eight is offered in roadster and touring models, both selling for \$5,000. Another model with a six-cylinder Continental engine is priced at \$3,875. A sport model with four-cylinder Duesenberg engine sells for \$4,585. The Northway is a new car which is largely assembled of standard units. The touring car and roadster sell for \$4,200, and the sedan is priced at \$5,200. The engine is a six-cylinder Northway, valve-in-head type with cylinder dimensions of $3\frac{1}{2} \times 5\frac{1}{4}$ in.

Ace Has a Disk Valve

Up to the present time, the Ace car shown at the Astor, manufactured by the Ace Motor Co. of Ypsilanti, Mich., has been distributed solely on the Pacific Coast. This car is now to be distributed nationally and the company is changing its policy coincidentally with bringing out a new model incorporating the Guy disk valve engine. This is a six-cylinder engine incorporating a new valve action. It is a development of the disk valve principle, the valves being in the heads of the cylinders and operating at one-eighth crankshaft speed.

The valves are operated by a vertical shaft which operates in turn a set of spur gears lying horizontally above the cylinder block. Each of these spur gears is a concentric with a disk valve, which operates with it, the disk valves containing four slots which act alternately as intake and exhaust ports, as they pass over corresponding ports in the cylinder head. The valve, which is somewhat the shape of a Maltese cross, is keyed to the same vertical shaft as the gear which drives it.

As the valves seat upwardly against the cylinder head, they are sealed by combustion and are held against suction or vacuum by a spring sufficiently powerful to overcome the piston suction. The valves are lubricated, operating on a film of oil between the flat face of the valve and the cylinder head. In the units used on the Ace car, the six cylinders are cast in block and have a $3\frac{3}{4}$ in. bore by 5 in. stroke. Cooling is by water pump circulation, ignition by the Atwater Kent system and lubrication by combined pressure and splash system.

The following standard units are used in the assembly of this car: Warner dry plate clutch and 3-speed selective gear-set, Gemmer steering gear, Stewart vacuum fuel system, and Salisbury axles. The springs are semi-elliptic, 53 $\frac{1}{4}$ in. in the rear and 38 in. long in front.

The car is at present being made in touring and roadster form. The lines of the body are distinctive, the running-boards being supplanted by steps and the edge of the body having a very distinct moulded form, giving stiffness to the doors and to the body sides. The equipment is complete including combination lighting and ignition switch, instrument light, electric motor-driven horn, pressure oil gage, ammeter, cigar lighter, circuit breaker instead of fuses on the electrical system, trouble lamp socket, tonneau light, foot rail, Motometer, ventilating windshield, electric tail and head light dimmers, electric cowl lights, tire carrier with an extra rim for the 32 by 4 in. cord tire. There is also a complete set of tools.

Foreign Cars at Hotels

Three foreign cars, the Austin, a British make; the Sauer of German design and the Citroen, a small French car, are on exhibit in New York hotels, the Aus-

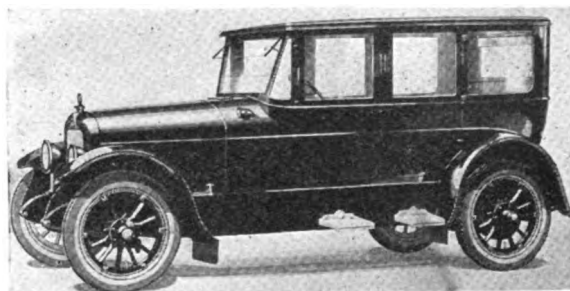
tin at the Waldorf-Astoria and the Sauer and Citroen at the Hotel Commodore. The Austin is imported from Birmingham, England, and is offered in several body types with wheelbase of 131-in. The Austin engine is a four-cylinder job of $3\frac{3}{4} \times 5$ in. with the cylinders cast in block with a detachable head.

The Sauer is characterized by a roller worm-driven rear axle and by an automatic gear-shifting mechanism.

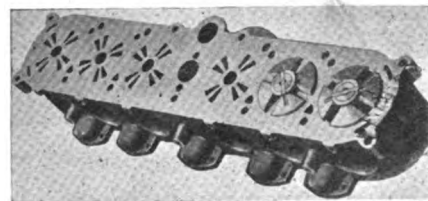
The Citroen is a small car which is claimed to have unusual fuel economy in that it is said to give 36 miles to the gallon. It is made in wheelbases of 98 in. and 114 in. and is offered f.o.b. New York City with all duty and taxes included for \$1984 in the roadster; \$2284 in the coupe; \$2774 in the sedan; \$1984 in the touring car; \$2717 in the brougham and \$2355 in a special sport model.

An exporters' show is also staged at the Majestic Hotel, but the cars are largely duplicated at the Palace.

The New Ace Sedan



View of the disk valves used in the Ace engine. Aside from the power-plant, the car is assembled of standard units



Maibohm Has New Bodies and Minor Chassis Changes

The Maibohm line is augmented by a new coupe at \$2395, and a custom built special job, which is not priced. Both of these are mounted on the standard chassis. The special job has a khaki top, aluminum steps, cord tires and is fitted with either disk or wire wheels. The upholstery is in leather and the seat is of the divided type.

The changes on the chassis are of a minor nature, the rear springs now have vanadium steel leaves, and the construction of the axle spring seats is now such that the spring seat collar is shrunk on the tube and then riveted. The radiator mounting is also changed so that the minimum amount of vibration will be transmitted from the frame to the radiator.

Several color options are available on all of the models, these being dark green, dark maroon, battleship gray and a special color known as beige, which is a little bit darker than khaki.

Dixie Flyer Shows New Speedster

A new roadster, designed as the Speedster, is being exhibited by the Dixie Flyer. This is a two-seater which is given a racy appearance by lowering the seats and inclining the steering column at an acute angle. The price on this model is \$1,895, which includes spotlight, front bumper, wire wheels and cord tires. No changes have been made in previous models except some refinements in appearance. Nickered radiator shells and windshield frames, bullet side-lights, Macbeth lenses, genuine leather upholstery and Gabriel snubbers are some of the improvements.

Mitchell Adds Two Models

Mitchell is showing a new 7-passenger touring car and a four-passenger sport model. The latter is painted a light brown and the touring car in maroon. Wire wheels are standard equipment on the sport model. The most noticeable change in the Mitchell line for this year is in the radiator design. The slanting

radiator of last year has been replaced with a conventional vertical type and adds materially to the appearance of the entire car. A slight change has been made in the rear axle gear ratio to get better performance from the gear changes and in acceleration. Better carburetion has been secured by hot-spotting the intake manifold.

R & V Knight Shows a "4"

In addition to the Model J 6-cylinder line, the R & V Knight is displaying the new four-cylinder model R. Although there have been a few of the new fours running in the vicinity of the factory, the models on display are the first to be seen in the East or by the public in general. In most respects, the four is a duplicate of the six, changes being made where necessary in the size of the parts. The engine is the same as the six, less two cylinders but the bore is slightly larger, being 3¾ in. The stroke is 4½.

The price of the four is \$2,150 for the touring car and \$3,150 for the sedan. The engine is a unit powerplant. The tire carrier is attached to an apron which goes between the frames over the gasoline tank at the rear. The wheelbase is 116 in. and tires 32 x 4 in.

Kissel Adds New Bodies

Kissel shows three new bodies, a tourster, speedster, and coach-sedan. The body of the coach-sedan is built very compactly and resembles a coach body. The seats are wide enough to comfortably accommodate three persons and the interior fittings have been given special attention. The fenders are of the new crown type and have leather mudguards on each front fender. The extra wire wheels are mounted one on each side of the hood and a trunk rack at the rear and the luggage rail on top of the body permit the carrying of extra baggage on long trips without inconvenience to passengers.

Elgin Shows Minor Refinements

The only exterior change in the Elgin is the option of colors on the bodies. In addition to the body line is the coupe

priced at \$2685. This is a smaller edition of the sedan, incorporating the necessary changes in design. Slight refinements have been made in the engine and the rocker arms and valve tappets are now fitted with covers to prevent the accumulation of dirt and to keep the oil and grease inside.

Monroe Shows Enclosed Models

The chassis of the Monroe remains unchanged, but two new enclosed models have been added to the body line, these being a coupe and sedan, both priced at \$2500. The prices of the open models remain at \$1440.

Velie Adds a Seven-Passenger

Velie is showing for the first time a new seven-passenger touring car using the model 48 chassis. This car is finished in maroon and has many details which will appeal to the owner. There are three lockers in the back of the front seat, covered with doors. The seat panel is finished in mahogany and in this respect conforms to the finish of the instrument board. The rear axle is larger than in the other Velies and has a special gear ratio. Tires are 33 by 4½-in. cords.

Allen Adds a Roadster

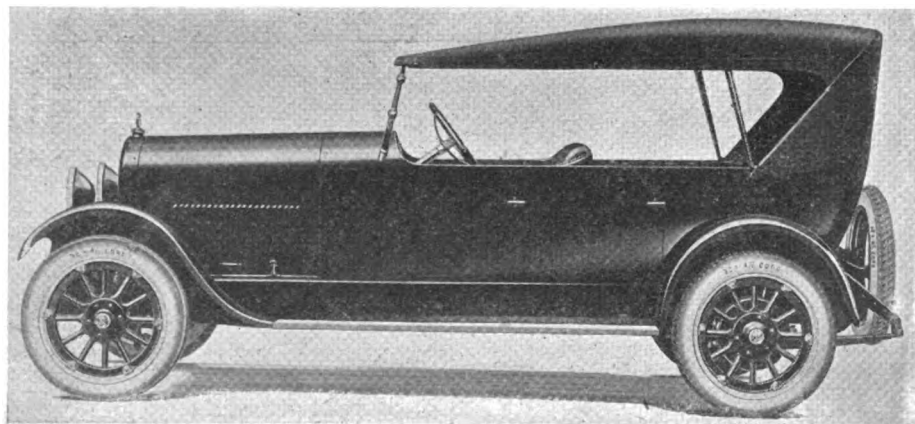
The Allen line is now enlarged to include a roadster body, which is shown for the first time. Previously the body equipment was confined to a touring car and a sedan. The new roadster is \$1595, the same price as the touring car. The chassis remains identically the same as before, but there are three color options on all body models without extra charge. The starting and lighting system was changed from Auto-Lite to Westinghouse a few months ago.

Larger Pilot Shown

The new pilot is larger than the 6-45, the wheelbase being 126 in. and the engine, a Herschell-Spillman, having six cylinders 3¾ x 5. This gives a horsepower rating of 25.35.

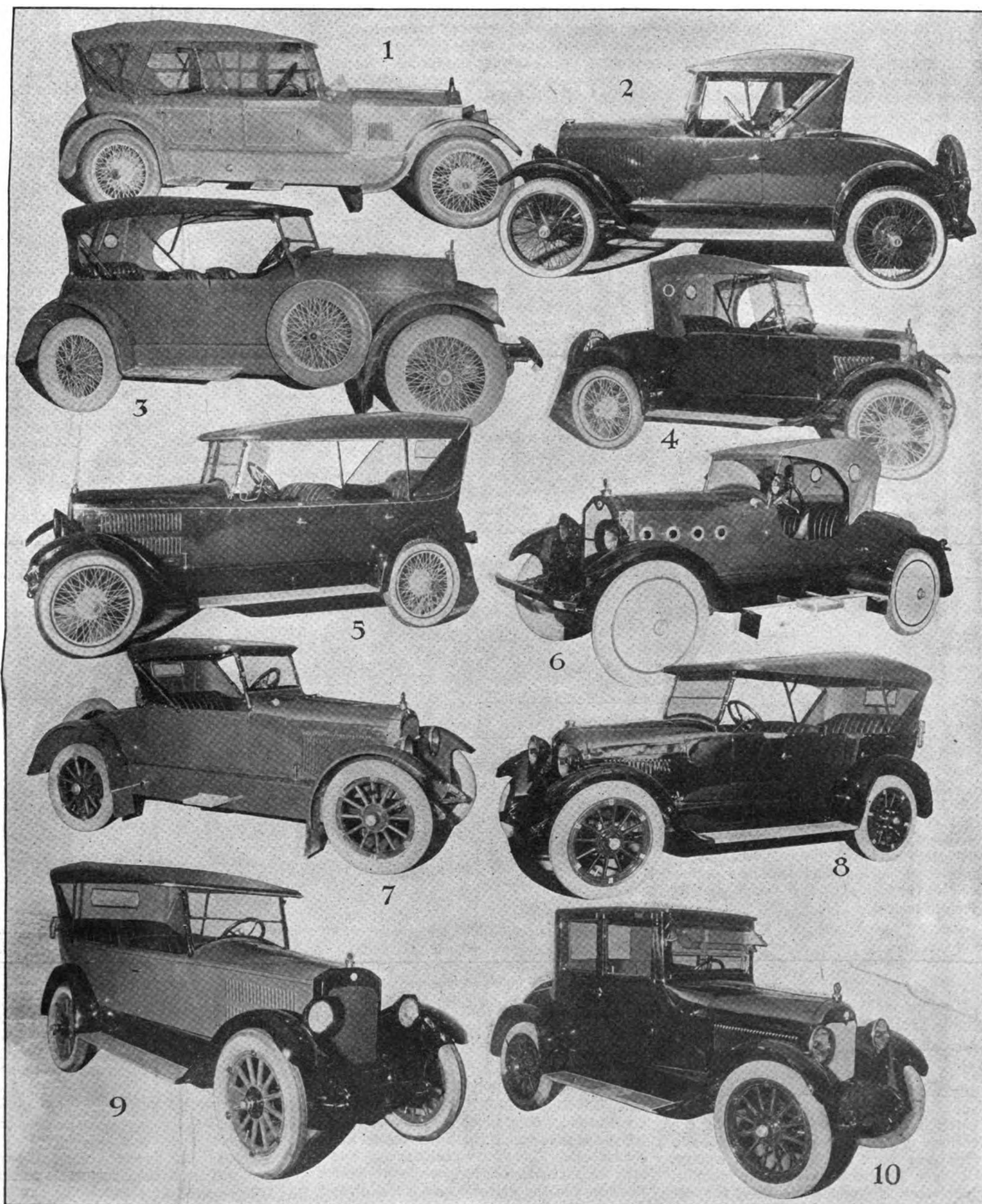
Six different bodies are fitted to the one chassis model and Pilot production will be centered on this one chassis model for the coming year. The bodies include a two passenger roadster, four passenger sport model, five passenger touring car, seven passenger touring car, four passenger coupe, five passenger sedan. All of the body models have a streamline design with a large high radiator.

The use of the Herschell-Spillman engine is a new departure for Pilot, a Teetor engine having been used on the 6-45. The cylinders are cast in block, the valves are enclosed and the head is removable. The top half of the crankcase and the cylinder block is integral. Lubrication is a combination of four speed and splash and the cooling water is propelled by a centrifugal pump. The radiator is of cellular type, and the fan is driven by belt.



New Pilot uses the Herschell-Spillman engine and offers six bodies on a 126-in. wheelbase chassis

A Double Quintet of the 1921 Cars



1—Roamer Touring Car; 2—Seven-passenger Velie model 48; 3—Kissel Tourster; 4—Allen Roadster;
5—Mitchell four-passenger Sport Model; 6—Dixie Flyer Speedster; 7—Maybach Roadster; 8—R & V
Knight four; 9—Mitchell seven-passenger car; 10—Elgin Coupe

The gearset is of the selective sliding type and, together with the clutch, forms a unit powerplant with the engine.

The clutch is a Borg & Beck 10 in. dry plate and the rear axle is of the floating type, the differential gears of which are adjustable and easily removable.

The service brakes are internal and the emergency external, operating on 14 in. drums on the rear wheels. The springs are semi-elliptic all around, the rear set being underslung to give the body a low hung appearance.

Specifications:

Wheelbase—126 in.
Engine—Herschell-Spillman
Cylinders—Six, 3½ x 5.
Starting and Lighting—Bijur
Ignition—Connecticut
Gearset—Muncie
Clutch—Borg & Beck
Axles—Columbia
Steering Gear—Ditweiler.

Anderson Changes Bodies and Prices

Anderson has made some changes in the bodies, the most prominent of which is the placing of a ventilator on the cowl. Other minor changes have been made inside of the body including a tool pocket in the left front door. The lamp design is entirely new, and the cars are regularly equipped with cord tires on the sedan and coupe bodies. The prices of all the models have been reduced as follows:

	New Price	Old Price
Seven-passenger touring car	\$1,845	\$2,195
Four-passenger coupe....	2,795	3,200
Five-passenger touring car	1,795	2,145
Convertible roadster.....	1,795	2,195
Five-passenger sedan	2,795	3,200
Four-passenger sport.....	1,845	2,175

In addition to these changes, there is an entirely new body model, known as the two-passenger speedster, priced at \$2,195. The chassis is identical with the other chassis with the exception of a special gear ratio. There are two extra cord tires and two extra wire wheels, these being included as standard equipment. An option of any body color is given on this speedster.

Columbia Brings Out New Model

Mounted on the present chassis Columbia has added an entirely new model in the way of a 5-passenger fitted with a permanent top. The newcomer sells for \$1,995 with steel disk wheels. The body work is well carried out with the rear fenders extending well below the center line of the wheels. One of the features of the body is the exceptionally large rear door, which is almost square. All door hardware is on the outside. Upholstery is in black leather, the car itself being finished in blue. A detail appealing to the owner and which it is claimed will add materially in the saving of fuel is the use of a device called

the Flometer, which automatically measures the amount of fuel used. It is mounted on the instrument board.

New Light Eight Oldsmobile

Oldsmobile has rounded out its line for 1921 by the addition of a new light eight-cylinder car. While the new car resembles in general the other Oldsmobile models there are certain distinctive features. The most striking feature is the low suspension. The rear body panel has been carried higher than in conventional body practice, making the top correspondingly shallow. This gives the car a sort of squatty appearance from the rear, but nevertheless pleasing to the eye.

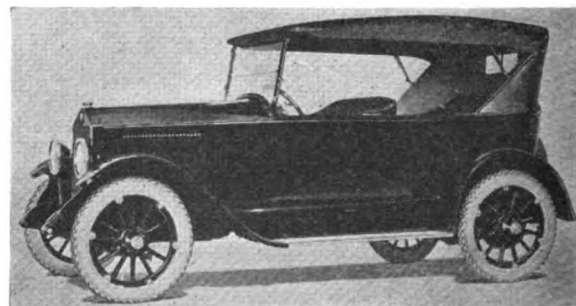
The new Olds is built on a 115-in. wheelbase chassis. The engine in reality looks like a small edition of the Cadillac eight. In place of the one water pump on the Oldsmobile Big Eight, the smaller eight has two, mounted fore and aft at the front of the engine and in an accessible position. The small eight is finished in dark blue with a light blue mould at the top. Wheels are natural finish.

Dort Changes Body Design

An entirely new line of bodies is the feature of the Dort exhibit. Although all the bodies have been redesigned, the most striking departure is the shape of the radiator. Included in the complete line are five-passenger touring, three-passenger roadster, five-passenger sedan and three-passenger coupe. The bodies are finished in a soft shade of green, and the chassis and fenders are enamelled black. The interiors of the bodies are roomy, but storage space has not

One of the New Dort Bodies

A five-passenger touring car. The shape of the radiator has been changed very materially



been sacrificed. Pockets in the doors, and compartments under the seats, plus space under the rear deck of roadster and coupe, provide for luggage, tools, etc. A pocket is provided in the rear of the front seat of the touring car for side curtain storage.

The floors of the enclosed cars are carpeted to match the upholstery, and silk curtains of the same color cover the windows. The windshield is built in with rainshield and is adjustable for ventilation. The dome lights are finished in silver and the cowl lights are concealed. There are full front and rear seats in the sedan, while a divan for two and the driver's seat set slightly forward is the seating arrangement in the coupe.

The wheelbase has been increased from 105½ to 108 inches.

Scripps-Booth Has Fisher Bodies

Scripps-Booth has added a touch of refinement to its enclosed cars in that Fisher bodies are now used. The coupe and sedan are roomier than before and the appointments are well carried out. There are no changes in the chassis or in the open models, although the bodies on these will be Fisher built later in the season.

Lexington Sedanette

Lexington is showing a new sedanette mounted on the model T chassis. The new car embraces all the features of the open car in the way of the tilting headlight lenses, etc. One of the characteristics of the new body is the front door, which has been constructed so that it forms part of the windshield structure. Thus, instead of the usual triangular pieces at the sides of the shield, these are incorporated in the door, which naturally is somewhat larger and therefore affords easier entrance into the driving compartment. A feature appealing to car owners is the placing of the tools under the floor boards of the rear compartment, made accessible by simply lifting the carpet. The sedanette in the five and seven-passenger models sells for \$4,400 and \$4,500 respectively.

Westcott Shows a New Coupe

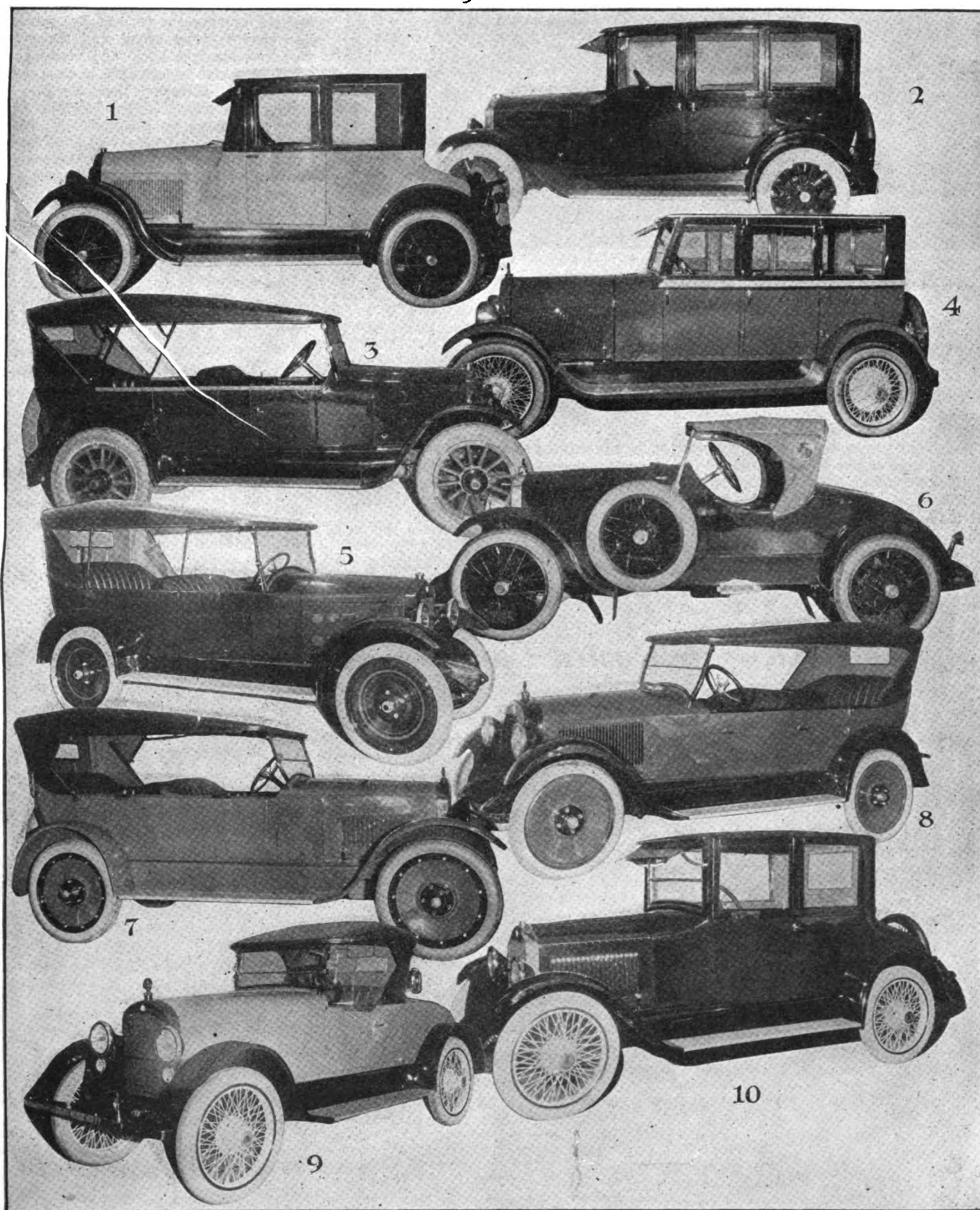
Westcott shows a new four passenger coupe on the C-38 chassis. The price is the same as the sedan, \$3390, and the body resembles it very much with the exception that it is slightly smaller. Otherwise the Westcott line remains unchanged.

Jackson Adds a Four

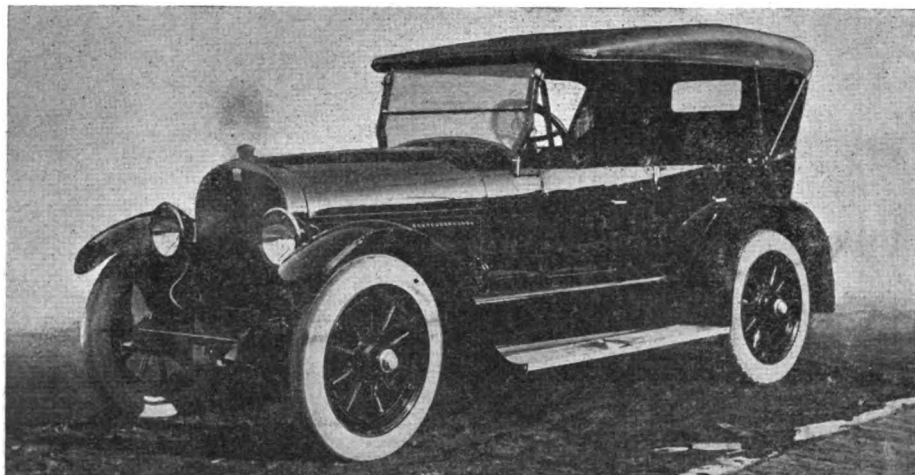
Jackson is showing a new four-cylinder job fitted with a Lycoming 3½ x 5 engine. The price had not been definitely set the opening day of the show but is expected to be approximately \$1445. There will also be coupe, sedan and roadster bodies. The wheelbase of the new model is 114 in. Disk wheels are stock equipment and these are fitted with 32 x 4 in. tires. The upholstery is all in leather. With these exceptions the four-cylinder model closely resembles the six-cylinder.

The six-cylinder line is being continued and a new four passenger coupe is added, this being priced at \$3760. The chassis specifications remain the same, but the tire sizes have been increased on this one body model to 32 x 4. Disk wheels and cord tires will be standard equipment.

Some of the New Car and Body Models



1—Westcott coupe; 2—Scripps-Booth sedan; 3—Oldsmobile light eight; 4—Lexington sedanette; 5—Jackson four-cylinder touring car; 6—Anderson Speedster; 7—Elcar touring model; 8—Five-passenger Columbia with permanent top; 9—Sayers Derby roadster; 10—Scripps-Booth coupe



Haynes with shorter wheelbase and lower price

Franklin Has New Hood and Dummy Radiator

This year Franklin resembles more nearly the conventional design of cars, so far as the hood is concerned than ever before. A dummy radiator in appearance somewhat like the Italian Fiat has been fitted, which brings the hood up in front to such a height that the top line of the hood is nearly horizontal. There still is a slight inclination of the dummy radiator. One of the appealing features of the new hood is the fact that it is

interchangeable with the old style hood, so that any Franklin owner can virtually make his old car appear like the new models without altering any of the units at the front of the car.

Haynes Has a New Model Selling for \$1,985

Haynes Automobile Co. shows a new model, this being the Haynes 50. The most radical difference between this new six and the model 47 is the difference in price, the new model being \$1,985, while

the Model 47 4-passenger is \$2,685. The decrease in wheelbase from 132 to 121 in. and the reduction of tire size to 33 x 4 instead of 34 x 4½.

For the present there will be but one body model fitted to this chassis, this being a touring car to seat five people. The hood is very broad and the cowl continues straight backward giving the car a very high appearance in the front, somewhat on European lines.

The powerplant is identical with the powerplant used on the model 47, having six cylinders 3½ x 5. The clutch and gearset are in unit with the engine and the whole is three point suspended.

Specifications:

Price: \$1,985.

Engine: 6 cylinders 3½ x 5

Fuel Feed—Vacuum

Carbureter—Rayfield

Clutch—Dry Plate

Gearset—Three Speed

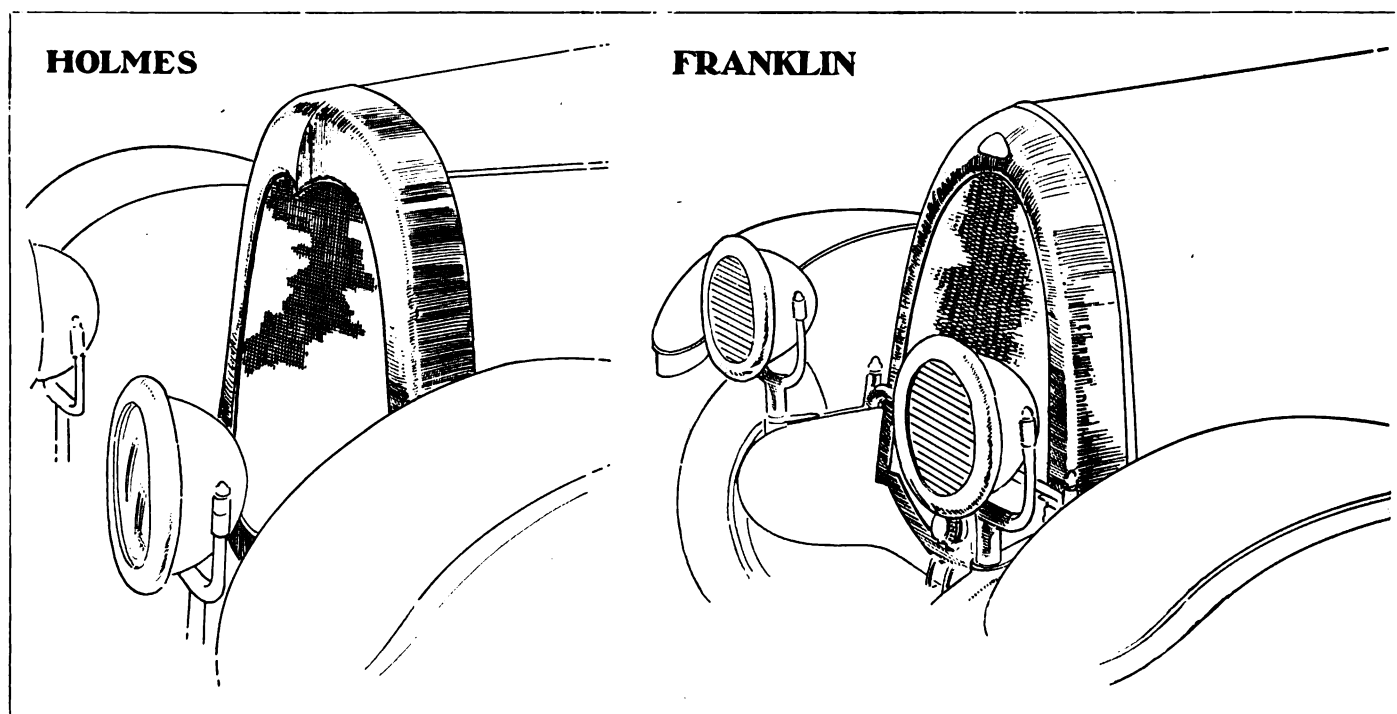
Wheelbase—121 in.

Tires—33 x 4 inches.

Crow-Elkhart Six Has New Herschell-Spillman Engine

The Crow-Elkhart Six is now using a Herschell-Spillman engine instead of the Rutenber. The bore is 3¼-in. and stroke 5 in. The radiator design has been slightly changed, but in other respects, the chassis remains practically as before. Disk wheels are standard equipment and individual steps replace the runningboards.

And Now Two Air Cooled Cars Have "Dummy" Radiators



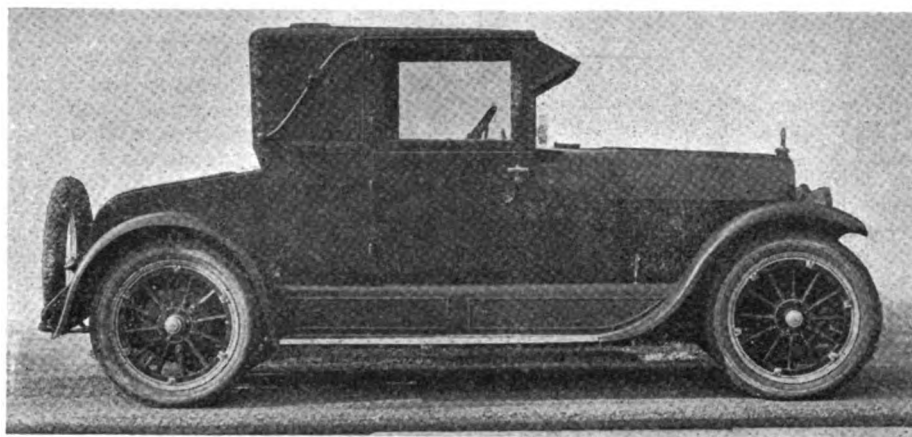
No change has been made in the shape of the Holmes hood, but the metal plate which previously formed the front, has been replaced by a basket weave wire screen. Franklin has an entirely new hood, and now looks more like the conventional water-cooled car

Milburn Shows New Electrics

Milburn shows two new electric cars, 38-D and 38-T. These are practically identical with the exception of the battery equipment. The cars are not yet in production but it is expected that they will be in the course of three or four months. The principal changes have been in the matter of battery equipment and the convenience of battery handling. For taxicab and other service requiring more or less continuous operation, the batteries are mounted on rollers so that they can be quickly replaced with fully charged batteries. The tire equipment is 32 x 4½ in. cord on wood wheels. A light speed wagon body will be available and speeds up to 28 m.p.m. and a radius of 75 miles will be given. The prices have not yet been decided on for the new models.

Stearns Alters Cylinder Head Construction

With the exception of two changes the Stearns line remains unaltered. The cylinder head has been redesigned so that the cover is of aluminum, instead of iron and is held to the cylinder head by means of locknuts screwed down on the spark plug bosses. This cover was previously held in place with bolts.



Jordan has a new body model, known as the Landaulet, which is being shown at the New York and Chicago shows. The chassis is identical with the previous chassis

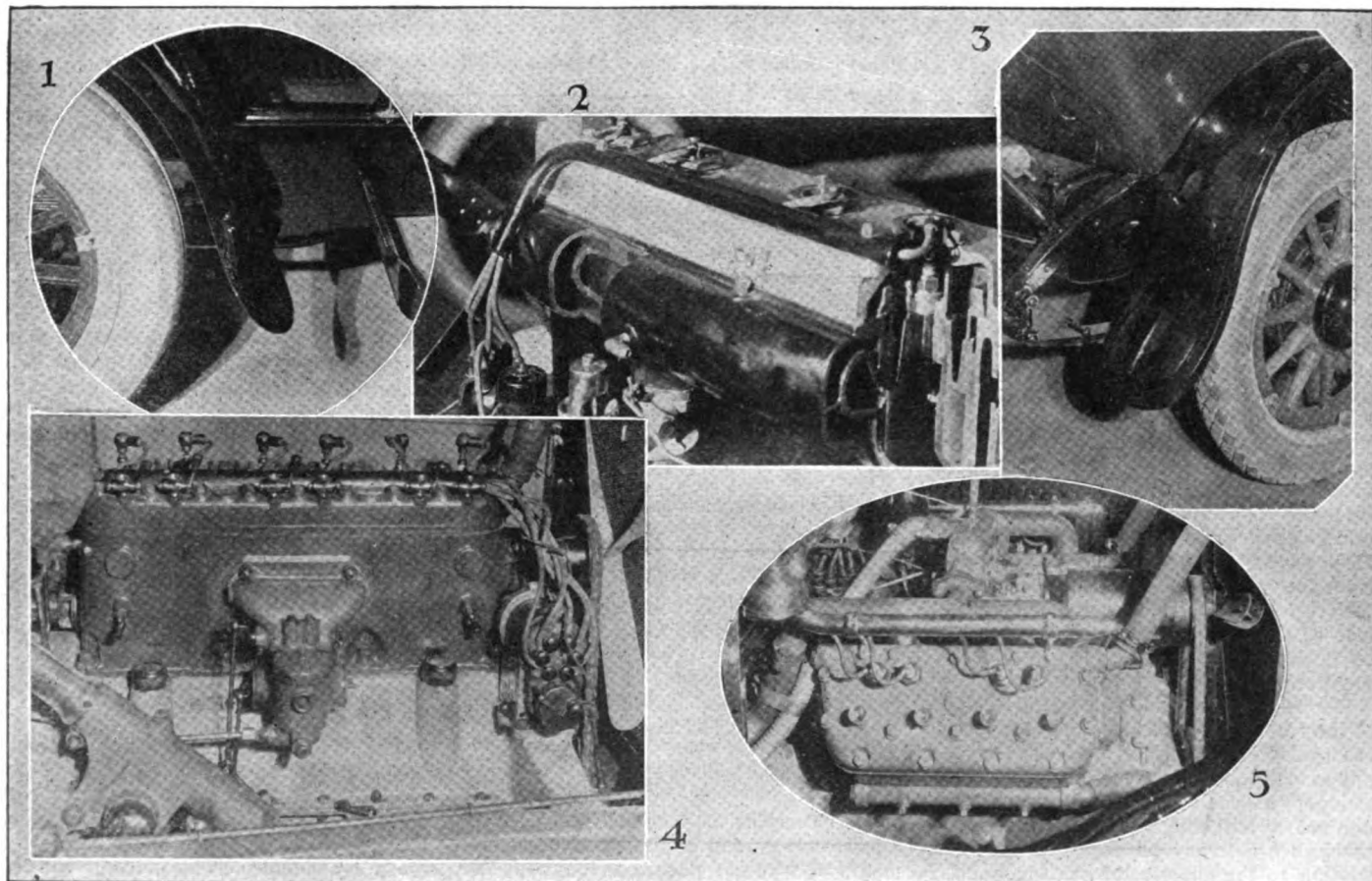
The bodies used this year are Bender, instead of Racine, and while the appearance is that of a lower looking job, the essentials remain as before.

Three Fiat Imported Models

Three Fiat models are being imported, only two of which are exhibited. Model 501 has a 4-cylinder engine with 2 9/16 in. bore and 4 5/16 in. stroke; model 505, which is not shown, has a 4-cylinder en-

gine with bore-stroke dimensions of 75 x 130 mm.; model 510 has the same cylinder dimensions as 505, but the engine has 6 cylinders. Chassis prices are \$2,100, \$2,300 and \$4,100 respectively. Other new features on all models are detachable cylinder head, unit powerplant, starting button on dash, and carburetor adjustment on end of steering column. All models have dry disk clutches, and 4-speed gearsets with control lever inside the body.

Some Interesting Constructional Details



1—The runningboard on the National does not extend clear back to the rear fender. 2—The Stearns has an aluminum cover over the cylinder head; it is held in position by bronze screws. 3—Long rear fender on new Olds light eight. 4—F. I. A. T. six-cylinder engine has detachable head for the first time. 5—The powerplant in the Oldsmobile light eight

Holmes Series 4 Has Improved Cooling Device

Several new features are incorporated in the Holmes for 1921 which will be known as the Series 4. The air cooled engine has been retained, but a device called an aeroduct has been placed around the cooling fan. The function of this part is to direct the air leaving the fan, in that way to increase its efficiency. The cooling effect obtained is said to be doubled by the addition of this device, and with proper lubrication, overheating is said to be impossible. The overhead valve mechanism is provided with individual covers, and some change has been made in the rocker arm design. The construction of the front of the hood has been changed so that it resembles the conventional radiator more closely. The Stromberg carbureter is standard equipment for 1921.

Detroit Electric Alters Body

Detroit Electric shows models 86 and 88 priced at \$4000. The chassis and battery equipment remain as before, and all the changes are in the construction of the body. There is no wood exposed on the new models, and a quarter glass window is added at each rear corner to give the driver an uninterrupted view on all sides. These quarter glasses are rounded and blend in with the body lines. The glasses on the doors now lift up and down instead of being stationary as before.

Saxon Uses Romon Chassis Lubrication

Saxon is now equipped with the Romon automatic chassis lubricator as standard equipment. This system provides centralized lubrication for the entire chassis, the lubricant being contained in the Saxon installation in a reservoir mounted on the steering column. In connection with the reservoir is the distributing system which feeds oil under pressure to all of the chassis lubricating points. The tank contains a series of plunger pumps which distribute the oil under high pressure through the system. These plunger pumps are depressed by cams and return to normal or upper position by return springs. The camshafts which drive the pumps are rotated by a ratchet and pawl arrangement operated by a reciprocal lever on the outside of the reservoir. This lever normally hangs down by the side of the box, but when the pumps are to be operated is lifted to an upright position.

The rocking of the lever on the outside of the reservoir turns the camshaft inside the tank by the ratchet and pawl mechanism. This in turn depresses the plunger in each pump, forcing the oil against a ball check in the intake and through a delivery passage into oil lines leading to the chassis lubricating points. Ball checks are also located at these points so that the oil forced to the bearings remains there and also remains in the line between the reservoir and the

bearings, which insures immediate movement of oil to the bearing as soon as the pressure is again exerted at the pump.

To take care of the various chassis points which are lubricated, a number of special fittings are used, these being largely of the standardized character. The system displaces all the grease cups on the chassis, the leads to the points to be lubricated being through rigid copper tubing as far as possible and then to the moving parts through flexible tubing to take care of the flexure of the spring and relative movements of the different parts of the chassis. The torque arm is now attached to the middle cross-member, and the engine is spread to the frame at the rear.

Moon Revises Prices and Shifts Gearsets

Coincident with the opening of the show, Moon prices are raised \$200, the touring cars being \$2685 on the 6-68 and \$2185 on the 6-48; the enclosed cars are \$2185. The prices were reduced \$400 a few months ago so that the net reduction is \$200. Many changes of a minor nature have been made in the bodies and the gearset has been changed from Brown-Lipe to Warner.

The Hotel Census

Total exhibitors	13
Cars exhibited (all gasoline)	19
Stripped chassis exhibited	2
Four-cylinder	12
Six-cylinder	4
Eight-cylinder	3
Air-cooled	1
Water-cooled	18
Tappet valve	18
Sleeve valve	1
2-3 passenger roadsters	3
4-5 passenger touring cars	2
6-7 passenger touring cars	4
2-3 passenger coupes	2
4-5 passenger sedans	5
6-7 passenger (other enclosed cars) ..	1
Wire wheels	4
Disk wheels	4
Wooden wheels	11

Apperson Changes Engine

With the exception of a change in the engine design the Apperson line remains exactly the same. The cylinder head is now made detachable, and this change has been effected without materially altering the looks of the engine.

Templar Adds Alemite System

The Templar has added the Alemite lubrication system and made some refinements of a minor nature throughout the chassis. There is a new coupe with a capacity of three passengers that replaces the former four passenger model. The size of the body is the same and the

change is brought about by a rearrangement of the seats. Externally the coupe looks very much like the previous model.

New Rear End in Kline Kar

Two mechanical changes have been made in the Kline. The rear end of the propeller shaft is supported in an out-board bearing in the 1921 models, and the diameters of the brake drums have been increased by 4 in.

A New Stevens-Duryea Sedan

A four-passenger sedan, and a four-passenger touring model, mounted on the Stevens-Duryea chassis are shown for the first time. No mechanical changes have been made since this car was described in Motor World last fall.

Lafayette Has Changed Suspension

By redesigning the suspension, the height of the top of the frame on the Lafayette has been reduced to about 22 in. The minimum clearance is 9½ in. under the front axle. The angle of the steering knuckle has been changed in an effort to facilitate steering. The propeller shaft and axle driveshaft are tubular. Chromium has been added to the metal used in the cylinder block castings to increase its hardness. The chassis has been lightened wherever possible, the weight now being 2500 lb.

DuPont Uses Water Pump

Minor changes only have been made on the DuPont. Thermo-syphon cooling has been abandoned, and circulation is now secured by means of a centrifugal pump. The footroom on the front seat has been increased two inches on all models.

Minor Mechanical Changes in Dorris

Positive lubrication of the rocker arms is provided on the 1921 Dorris. The rockershaft is hollow and oil is conducted through it to the rocker arm bearings. The arms themselves are drilled, and copper tubes are inserted in the holes which carry the oil out to the tappets. The pushrods are enclosed in brass tubes, their lower ends being lubricated by oil trickling down from the top. All brass parts on the engine are finished in nickel as is the throttle control. A Timken fixed-hub type of rear axle and Thermoid universals are used.

Hansen Adds a New Sedan

The Hansen has discontinued the 4-passenger sedan and shows a new 5-passenger sedan which has many improvements of a minor nature, yet all calculated to give the driver more comfort or more convenience. The price of the new job is \$3,165. The glasses in the doors are of the rimless type and are operated by a crank on the lower part of the door. The chassis remains unchanged.

Maxwell Has Some Chassis Changes

While outwardly the Maxwell shows no marked changes, there are certain details in the chassis which have been changed for better performance and easier maintenance. In the engine the most noteworthy change is the adoption of Lynite pistons. The most important changes in the rear axle consist of the use of spiral-cut bevel gears in the place of the straight bevel type of one last year. The car now uses a tubular propeller shaft and additional stiffness has been secured by installation of truss rods on the rear axle. No changes have been made in the bodies, excepting that in the enclosed types velour is used in place of whipcord for upholstery.

Davis Has a New Special Roadster, \$2150

Davis shows a new special roadster, known as a sport car and priced at

\$2150. It has a capacity of four passengers, and is known as model 53. This is simply an addition to the body line, the chassis remaining the same as before. The prices on all models have been reduced as follows:

	New prices	Old prices
Five passenger touring car	\$1895	\$2185
Four passenger sport car	1895	2225
Four passenger sport car	2150	—
Two passenger roadster	1995	2225
Two passenger special roadster	2150	2350
Five passenger sedan ...	2795	3185
Four passenger coupe ..	2795	3185

Fergus Has Front Wheel Brakes

The Fergus for 1921 has self-adjusting, internal expanding front wheel brakes. A thermostatically controlled valve has been placed in the exhaust line which controls the amount of heat supplied to

the hot stove automatically. Another feature is a thermostatically controlled clutch in the fan drive, which does not engage until the water temperature reaches 160 deg. This car is guaranteed for five years, and the chassis price is \$10,000. Disk wheels are standard equipment.

American Adds a Sport Model

No material changes have been made in the American. A 4-passenger sport model, complete with disk wheels and wind deflectors, has been added to the line, and this car sells for \$2,550. The radiator shell is made of aluminum, and the runningboards are of pressed steel.

Derby Roadster in Sayers Line

A roadster model, known as the Derby, has been added to the Sayers line of body models. This new job is priced at \$2,595. No mechanical changes have been made by this manufacturer.

1921 Cars

EASIER TO REPAIR

Many Improvements in Accessibility Seen in Exhibits at the Show—Rattle and Poor Lubrication Conditions Also Are Overcome in Numerous Makes

THE American car makers have done much to their product for 1921 that will help the men whose job it is to keep the vast number of automotive vehicles in repair. While, obviously, there is little to be looked for at the show in the way of radical changes that would affect service and maintenance, careful scrutiny of engines, axles and chassis in general reveals certain things that should appeal strongly to servicemen. Some of the more important are:

1. Cleaner chassis design.
2. More attention to hot-spotting of intake manifolds.

WITH the use of Hotchkiss drive growing in the light and medium weight cars there has been a practical elimination of the torque members on the lower and medium priced cars with the result that semi-elliptic springs have naturally increased, these being the simplest and most logical type with this style of drive. Better methods of hanging the brake linkage and by means of coil springs and other devices, to keep the parts taut and rattle proof are also common instead of occasional.

Hot-Spot Installations

The hot-spotting of manifolds is of vast interest to those who view the cars from a maintenance and service standpoint, because much of the former grief encountered by service station operatives

was due to the inability of engines to cope satisfactorily with present day fuel. Although there is nothing at the show in the nature of a radical device like the fuelizer Packard showed last year, close observation of the engines shows that the proper application of heat to the mixture has received its full share of attention. The application of heat to the fuel in the right way means not only better engine performance but longer life to the engine, less bearing trouble, less cylinder wear and best of all, satisfied customers. Correct hot-spotting will do much to eliminate much of the misbehavior of engines, which often cannot seemingly be attributed to any particular cause.

No service man who visits the show can help but be impressed by the cleaning up the engines have received in the

3. Better layouts of spark and throttle rods.
4. Better brake mechanism.
5. Centralized chassis lubrication methods.
6. Interchangeability of wire and steel disk wheels.
7. Better body work.

Cleaner, neater chassis with the rattle-breeding linkage removed are the rule at the show. Each year the improvement in this respect is noticeable and 1920 was no exception. *In fact as far as a study of chassis detail is concerned there has been a more noticeable advance toward simplicity and accessibility than for many years.*

way of better layouts for the spark and throttle levers. Only a few years ago it was common and still is on some engines that one had to remove a half dozen levers and other units to get at the valve adjustments. To-day there is a tendency to place a rocker shaft at the rear of the engine and bring the levers back from the steering column end to this shaft and then run rods straight to the carburetor or ignition unit. This eliminates the criss-cross arrangement of rods that makes it impossible for a mechanic to swing a wrench sufficiently to set up the valves. On some engines like the new Allen, for instance, where the throttle rod does run in front of the valve covers it is well to note that the rod has been laced high enough so that the valve adjusting nuts are accessible. Hupmobile,

Mercer, Buick and Templar are typical examples of clean spark and throttle rod layouts, although there are many others which have given the same subject thought.

There is not the multiplicity of brake levers of former years. Cleaner brake layouts mean less work for the service station, because of the less number of parts to keep lubricated and the ability to keep out grit. The propeller shaft type of brake is popular, especially from the fact that it easily can be adjusted for wear.

Better Lubrication

Probably the problem which has engaged manufacturers more than any other on the chassis during the past year has been the matter of lubrication. The use of the Alemite system has greatly increased during the year, there being approximately fifty makes of cars at the show so equipped. Saxon has installed the Romon system, this consisting of a box tank mounted on the steering column just behind the dash. A lever which normally hangs down is raised and rocked, operating a pair of camshafts which in turn drive a series of small pumps forcing oil under high pressure to all the necessary steering, brake, spring, etc., wearing points. Saxon has contracted for the exclusive equipment rights for this system for a year.

The Fergus car is shown also with its centralized automatic lubricating system for the chassis. This is a job which has been previously exhibited and described. It is made on a small scale in New Jersey, selling chassis alone for \$10,000. Other cars were shown equipped with wick-feed oil cups designed to feed only when the car is running. Practically every car shown has some effort on improved chassis lubrication and by far the greatest percentage use oil, although quite a few used grease in some parts and oil in others, which seems a rather unhandy and inconvenient method.

Clutches and Gearsets

There is very little new in the clutch line, although some manufacturers have changed the type employed. The higher priced cars use the multiple disk type as a rule. The cone clutch is not much in evidence and has been abandoned in favor of the multiple disk type on the new Pierce-Arrow chassis. Most clutch installations are inaccessible. It is necessary as a rule to remove the entire gearset to get the clutch out, and to do this, in some instances, the rear axle must first be disconnected from the chassis and moved back. Open bellhousings are provided in some cases, and the Fiat gearset and clutch are arranged in such a way that the gears and clutch can be removed readily and replaced in about an hour's time without disconnecting the casing.

Gearsets are nearly all three-speed conventional types. Many are, however, fitted with propeller shaft brakes, operated, in most cases, by the hand brake lever, and so placed as to be

quite readily adjusted. Air pumps are mounted on the left side of the gear box of many of the more expensive chassis. An opening with cover and S.A.E. standard bolt spacing is provided on many stock gearsets, so that the purchaser can easily procure and bolt on an air pump flanged to fit the opening in the gear case.

Storage Battery Locations

Another point which some makers have studied from an accessibility standpoint and others have neglected is the location of the storage battery. On most cars this is placed so that it can be reached by lifting the front seat. There is a growing tendency, however, to put the battery where it can be reached by lifting a small trap door in the floor boards. An interesting point in connection with battery installations is the Briscoe method of mounting the battery in a frame cross member, thus doing away with the necessity for a separate cradle.

Spring Changes

While from casual observation there has not been much change in spring suspension there have been some detail changes which are important from the standpoint of quietness. One of the most interesting of these is the use of adjustable shackles on the Locomobile and on the Navarre which is a newcomer, made in Springfield, Mass., designed by a former engineer of the Locomobile factory. These shackles make it possible to take up the wear and sideplay which develops

into rattles and are a distinct accomplishment in extending the quiet life of the chassis.

Interchangeable Wheels

It seems not unreasonable to believe that the next few years will see a development in the interchangeability of the wire and steel disk wheel. Already there are indications of this at the show, there being one instance where a maker of steel disk wheels has so built his hubs that they are interchangeable with a certain make of wire wheel.

Many Cars Better Built All Around

Probably one of the chief worries of the service man is that of squeaks and rattles in chassis and body. However, if the cars shown at the show are typical of that which we shall see during the coming year, it is almost safe to say that the worries of the service man will be over. The 1921 cars are better built cars in the chassis and in the bodies. Much has been done to eliminate the metallic ring and rattle of doors, etc. Moderate priced cars which formerly used an all-steel construction in the body have, in some instances, gone to a wood and metal construction. Wood braces in the doors and wood seat risers in place of metal produce a more healthy sound when the car is in operation or when the doors are closed. There is a rapidly growing tendency toward the use of leather between the chassis frame and body and between the body and fenders.

Merchandising Stands Out in Equipment Exhibits

Successful Effort Is Made to Show Utility of Products

THE accessory and equipment exhibits at the show are, in the main, real merchandizing displays. The exhibitors have made a distinct effort to show the utility of their products in an interesting manner. The majority of the booths are well arranged, although here and there there is an exhibit that could stand a lot of cleaning up.

In general prices have remained stationary. However, there is some tendency on the part of the exhibitors to stimulate buying by price reductions, as quite a few cuts have been made, some of them amounting to as much as 40 per cent, although the average is between 20 and 25 per cent. In some cases this has been made pos-

sible by cutting the cost of production. Expensive materials have been supplanted by less costly ones wherever this is possible without injuring the quality of the article from the standpoint of use. Production is, almost without exception, at a low ebb.

One of the most interesting exhibits is that of the General Electric Co. At the front of its booth are three miniature buildings with glass roofs. One is a battery service station, another a general repairshop and garage and the third is a private garage. The details of the interior arrangement and equipment are worked out in the minutest details.

Right next to this display is the Westinghouse exhibit, and in it is a

unique device for displaying the various types of headlight lenses. A standard headlight is mounted so that it projects its light on a white wall. Between it and the wall there is interposed a disk around the circumference of which a number of different types of lenses are installed. By revolving this disk, it is possible to bring any particular lens in front of the headlight, and thus to show its light distribution.

The strenuous service to which the starting battery is subjected is demonstrated by the Witherbee Storage Battery Co. by means of a lifting magnet, which brings a 600-lb. load up a distance of 4 in. with a bang. The magnet is energized by a storage battery. This is an educational exhibit that makes the spectator think that, after all, the battery is a hard working and faithful servant.

The Stewart-Warner exhibit is dressed up in attractive style. There is a vertical display stand, divided into compartments which are lined with purple velvet, and in each of these is displayed one of this company's products, which have been gold-plated for the show. The stand is cylindrical and revolves continuously at a slow speed. The new Warn-O-Meter is also featured. This device is mounted in place of the radiator cap, and gives visual warning of excessive water temperature by means of a red light which is operated by a thermostat attached to the cylinder block.

The Clark Equipment Co. shows a bevel gear type rear axle designed for use on speed wagons of 1-ton or less capacity. It has a pressed steel housing, and the differential, which is supported in the carrier, can be removed from either the front or the rear of the axle. The weight is about 360 lb. In the Hotel Commodore this company has an interesting display of paintings of "The Spirit of Transportation," done especially for this event by American artists.

A new universal burning-in, running-in and testing machine is exhibited by the Fairbanks Co. This machine is designed to accommodate all types and size of car and truck, small marine, and airplane engines. The driving mechanism is designed to deliver 75 hp.

A portable combination grinder, reamer and drill is a new product of the Franklin Machine & Tool Co. A common base, to which is attached a 1/4 hp. electric motor, is used with the three tools, which are separate attachments.

The Accesso Mfg. Co. shows a trouble lamp with a magnetic base. The current from the battery, in addition to lighting the lamp, magnetizes

the base. This makes it possible to mount the lamp on any iron or steel part of the car that is convenient.

The Spirit of Do-Things

WHEN a man is a man who does things that can't be done he becomes a leader in any field in which he works.

Industries are like men. They have habits, and character, and careers. And the industry which does things that can't be done becomes a leader in the world of business.

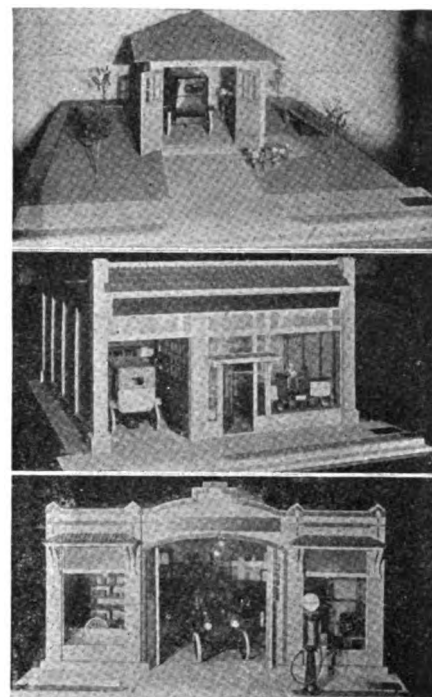
For more than twenty years the automobile industry has been doing the thing that couldn't be done. It is still doing it—in the show that is being held this week in Grand Central Palace in New York.

The thing that can't be done at this particular time is to make a slowed-down business start NOW instead of later on, when the "waiters" expect it will "come back normally."

The Spirit of the Automobile Industry can be felt as a mighty force throughout the show. It is worth much to walk through the show and feel the mighty force that lies back of it. It is inspiring to feel a great industry asserting that it is going to do the thing that can't be done. It makes one feel that he is going to follow this Spirit of Do-Things and be worthy of a part in the greatest industry in the world.

The unit includes coil, base, lamp socket, a 4 c.p. bulb and protecting brass tube and rod.

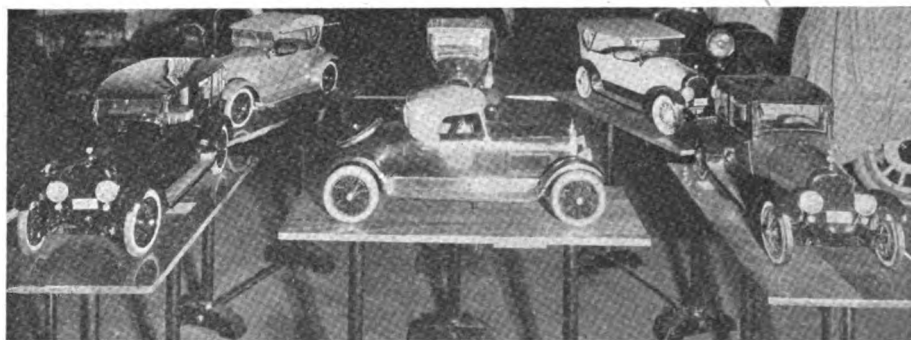
A system of chassis lubrication is



The General Electric Co. has three miniature buildings on display which are complete in every detail. Above—A private garage. Middle—Battery service station. Below—General garage and repairshop

being exhibited by the Merchant & Evans Co. The gearset, universal joints and rear axle are all supplied with oil automatically from a tank located on the dash. It is said that the system can be adapted to any car with little expense.

Another interesting utility is the Cole Cowl Relite. This is a little reflector which may be attached to any instrument on the dash. It is so placed that it reflects the light from the dashlamp onto the dial of the instrument. It is manufactured by the Stemco Engineering Co., who also exhibit a gasoline gage which is mounted on the dash. The dial is calibrated either in fractions or in gallons. It is actuated by means of a float in the gasoline tank.



The "Marmon Miniatures." There was a lot of interest in these small scale models at the show. An advertising campaign is being run in the New York dailies featuring these small displays

Dealers and Service Men in New York to Plan Year's Work

Meetings Are Numerous—Odds and Ends of the Show Story

A MARKED tendency among manufacturers to keep their dealers in the field selling, during show week, instead of bringing them to New York for the usual round of meetings and social sessions, is shown this year. A check on the hotels shows less than a dozen attempts on the part of manufacturers to get national representation at their meetings. The largest of the dealer meetings will be held by Dodge Bros., which probably will include more than 1000 dealers who are coming to New York in two special trains Monday morning.

The New York distributors, however, are taking advantage of the show atmosphere to gather their dealers in New York, principally at the showrooms, for sales conferences. These will be real shirt-sleeve business sessions with mighty little in the way of social pyrotechnics.

Of course, all of the larger groups in the industry, including the National Automobile Chamber of Commerce, Society of Automotive Engineers, Motor & Accessory Manufacturers Association, will hold the usual business and social sessions.

Factory Service Men on Hand

SELDOM has there been so many factory representatives at a show as are here this year, especially for the opening. It is significant of the trend in the industry that several service managers have stationed themselves at the exhibits of their companies to answer questions and see that nothing goes wrong with the cars displayed. Engineering departments also are well represented. The salesmen on duty are in most instances under the watchful eyes of factory sales managers. This is a business show and the men from the factories are sticking on the job. They have come for work and not for amusement.

Real Contests Needed

"The French are holding economy contests and staging tests to arouse interest and advertise the points of merit of their cars. We should do the same thing," said one of the oldest of oldtimers, who is very active in the trade. "We could easily stage owner-driven economy tours and other affairs of that kind, and it would re-stimulate interest in the important sales points of cars. What if one or two cars do seem to lead

in fuel economy. That's no reason every one will buy that particular make. Some folks wouldn't have that make if you gave it to them. The Ford is cheap and economical, but that's no sign it can dominate the market. Let's have some more of the old-time contests, under modern rules and conditions."

Jobbers Solid But Waiting

The jobbers, according to a man who has just made a long trip, are all in sound financial condition, but are waiting. Their stocks are depleted—are down lower than they should be—and too many of the jobbers seem "licked" by the present-day atmosphere. He said that if each car buys \$100 worth of equipment in a year it means \$800,000,000 of business in 1920, and that even half that would be "some" business. The cars are still running, he said, and must be equipped and serviced.

"They'll Pack 'em In!"

Claude R. Holgate, manager of the Newark show, and one of the oldest show managers in the business, spent Saturday in the show "sensing the feel of things." Manager Samuel A. Miles, and others, did the same thing, and Holgate summed his impression up confidentially in the remark: "They'll pack 'em in before the week's over!"

More Leeway

One point that was important to some old show-goers was the seeming leeway allowed to exhibitors in the interest of merchandising. On some of the cars were placards, tabooed in previous years. Marmon had a most unusual exhibit of baby cars, and "rules" gave way to merchandising.

Price Reductions Difficult

That prices cannot come down to the extent anticipated by the public was declared by a sales manager. He said the factories have sought reductions of a third in parts and materials, but that these reductions have not been found. He said one of the biggest motor makers has raised its price \$8, that malleables have come down 20 per cent, and that a few other similar changes have been made, but that when it is all averaged it makes very little difference in the price of the materials in a car. The only chance for a reduction is in cutting the price of labor and increasing its effi-

ciency, and this, he said, will be a gradual process.

Navy Training Needed

In the Elgin exhibit is a show model in African brown with coppered trimmings. "Some job to take care of all that copper plating!" remarked a show visitor, who realized, of course, that the model was a show job only. "But you wouldn't mind it if you'd been in the navy," smiled the ex-sailor salesman.

National Plan to Finance Truck Sales

AS a solution of the financing problems of the motor truck manufacturers on which David Thomas, general manager of the Motor Truck Manufacturers Association, has been working for some time, the Manufacturers Trust, a \$10,000,000 finance company, has been organized here with Col. C. R. Vincent of the Vincent Trust of this city as president. Although the company has been formed largely through the instrumentality of Thomas as general manager of the association, his aim being to obtain "methods of financing those having to do with the motor truck business that would be sound and flexible enough to meet all the requirements of the motor truck manufacturer who is conducting his business on a sound, safe basis," it is in no way connected with the Motor Truck Manufacturers Association itself. It is expected, however, that the members of the truck association will be given preference.

The methods by which the Manufacturers Trust hopes to attain its purpose of meeting the reasonable financial requirements of the motor truck business from the manufacturer to the user are co-operative, but the amount of stock the manufacturer may purchase has been limited to \$15,000, or 1500 shares of a par value of \$10. This has been due to the feeling that the manufacturer can well use his money in the manufacturing end of his business and that to require him to place a large amount in a finance company to finance his time sales would be like requiring him to "raise himself by his own boot straps."

When You're Old, Dog Tray, When You're Old—

By RAY W. SHERMAN



“HAD a wonderful year, Reilly! Had a wonderful year!”

Muskatt, the Sennett dealer in Muskattville, joyously lighted a fresh cigar, perked himself in Reilly's visitors' chair, and aired his optimism. According to the story he narrated to Reilly, who scattered Sennett cars in and about Callawassa, the little town of Muskattville, which was named after the dealer's great grandfather's sawmill, which had ceased to function, in the last year had seen a wonderful business in Sennett cars in Muskattville. According to Muskatt's own story he had contracted for twenty Sennetts and had sold twenty-nine.

“That's quite a good year's sales, isn't it?” smiled the distributor.

“I'll say it is!” agreed the dealer, in further search for praise from the source of his cars and contract.

“Did you make any money?” asked Reilly.

“Oh—some,” Muskatt's face fell.

“How much?”

“Well—when—when I pay expenses, and sell the used cars I have—provided I can sell them—I will have just made twenty-five a week for myself.”

“WHAT!”

“About—”

“Do you mean to tell me,” Reilly yelled, “that you've sold that many cars in twelve months in that little town of yours, with a gross profit of nearly ten thousand dollars, and haven't made any more than that? Have you tied up all your profits in old crocks? Where is it? Answer me?”

“I—I—I don't know,” faltered Muskatt. “I'm afraid I have traded poorly. I don't know—”

“Muskatt!” Reilly asserted. “Muskatt! Maybe you think you're making a big hit with me as a distributor by coming in here and telling me how many cars you have placed in the hands of consumers, but I want to tell you right now I'd a darned sight rather you had sold fewer cars and made more money. Don't you know that dealers who don't make money are of no value to a distributor or to a

factory? Don't you realize that there is something more to this business than just putting steel and rubber and wood together and placing it in the hands of the public? Don't you know that the up-building of the great business of personal transportation can't go on and grow unless the men who do the work get paid for it?

“Who is the most successful doctor? The man who serves humanity or the man who serves humanity and makes a good living for himself and his family at the same time? And who is the best lawyer? The man who does good work in the law or the man who does good work and is a good manager of his personal affairs at the same time?”

“Who is the best mechanic? The man who does good work in the shop and gets a fair wage, or the man who does good work, gets a fair wage and so manages his affairs that he saves some money and gives peace of mind to himself and his family?”

“I tell you, Muskatt, there's more to work than work, and there's more to business than getting rid of goods. Anybody can get rid of goods. Anybody can turn out a lot of work in the shop. But what we need in this business is men who can make money and KEEP money. What's the use of staying in business if it doesn't yield you a net profit?”

“No man becomes a useful part of business until he can make money in business. You can't expand a business unless you can make it pay. You can't get credit unless you can make money. You aren't of any account unless you can demonstrate your ability to be successful. It's the same with jobs and everything else—the man who is regarded as of consequence is the man who proves he is successful. And a man isn't successful even in a job unless he can manage his work and his personal affairs so that he is successful in both.

“You know, Muskatt,” Reilly continued, “sometimes I like to look at business and jobs and everything else from a reflective, introspective standpoint. Did you ever stop to consider why we all are

in business, or why we work at jobs and that sort of thing? And did you ever look ahead for ten or twenty or thirty years or so and wonder what you would be doing then?”

“A big percentage of those who go in business fail. A big percentage of those who work for a living are dependent on others when they're between sixty and seventy years old. We all hate to think that some day—well, we hate to think, that's all—and most of us don't.

“It takes a certain amount of money to assure a bare living in any degree of comfort. The amount of money required isn't large, but it takes management and planning to accumulate it. The man who works or the man who is in business owes it to the world to fix things so he can sit down and rest a bit some day. It's a matter of personal ability in management, Muskatt, to make things come out this way, and the man who is a poor manager in his own personal affairs is generally not very good in business affairs.

“The factory that doesn't see things this way is standing on its own foot. If any sales manager thinks he has done a big thing when he unloads a lot of cars on the dealers without any regard to their chance of making money he is building on a poor foundation. He might better make and sell fewer cars and build stronger dealers. He would make fewer sales now but a lot more five or six years from now.

“Making money isn't always the mercenary thing folks think it is, Muskatt. It's sometimes a thing to be proud of. Sometimes it takes ability to do it. And making money isn't the whole story either. The man who can make it does well, but the man who can keep part of what he makes does supremely better. Do you remember the old jingle?

“When you're old, Dog Tray,

“When you're old,

“It isn't what you've earned,

“It's what you've saved

“That's going to keep you.

“When you're old, Dog Tray,

“When you're old.”

Another "Still" Truck Show Fails to Arouse Wide Interest

Well-Staged Local Exposition in New York Commands Only Minor Public Attention and Dealers' Thoughts Turn to the Demonstration Idea—Some New Trucks and Models Introduced

By NEAL G. ADAIR

NEW YORK, Jan. 8.

NEW YORK has held another motor truck show and most of New York doesn't even know it. Like the exposition staged last year by the National Automobile Chamber of Commerce, the one conducted this week by the Motor Truck Association of America has passed into history without causing a respectable ripple of public interest. Neither show drew attendance of any account, neither commanded genuine newspaper recognition and neither gave any worth while stimulus to sales.

Both these shows failed, as nearly all "still" truck shows have failed, not because of any inefficiency in promotion or management but because the idea of the "still" truck show is not logical. The public cannot be interested in an exhibition of laboring appliances in evening clothes.

THIS show was undertaken by the Motor Truck Association of America, an owners' organization, after the N. A. C. C. and the Automobile Dealers' Association of New York had voted not to attempt a show. The manufacturers' chamber rejected the show proposal on the basis of its discouraging experience of last year, when expositions both in New York and Chicago, well promoted and managed except for the unfortunate selection of locations too far removed from the business centers of the two cities, received a cold shoulder from the public. The dealers based their rejection upon the manufacturers' experience and that of dealers in other cities during the past few years, where "still" shows, except in conjunction with passenger-car expositions, have been proven of little value to the trade. Then the Motor Truck Association, which has some New York dealer members, stepped in, and, despite apathy on the part of most of the metropolitan dealers and branch representatives, succeeded in selling space to makers and dealers representing 25 trucks out of 200 on the list of commercial vehicles manufactured in the United States.

The promoters engaged two armories, one on Broadway and the other a stone's throw off that thoroughfare—

and both within a few blocks of the heart of Automobile Row. The location was decidedly in favor of good attendance, but one of the armories—a tan-bark floored building in which are stabled and trained horses used in artillery work—wasn't a place that a person would stay in long unless he had to—and outside of the exhibitors most of those who came in were fairly prompt in exercising the privilege of going out. In this armory, fortunately, was the overflow of exhibits from the other, most of them additional chassis of lines shown in full at the armory with the board floor and no horseflesh; but, unfortunately, owing to space conditions, it was necessary to stage the army ordnance exhibits, expected to help draw crowds, and to hold the "transportation" lectures and movies in the armory where people didn't linger.

The promoters called it a "highway transportation show." Of course it wasn't. It was just a show of motor vehicles, like many that have gone before it. *The only way to show transportation, highway or any other kind, is to show it. And the only place to show it is out in the open where there is room to transport something.* The truck dealers of Milwaukee did it last fall at the State Fair, where they exhibited trucks in booths out of doors

and put trucks at work, with loads, on paved and unpaved highways, open fields and plowed ground and sold the motor transportation idea to thousands of farmers, merchants, manufacturers and transportation men who responded instantly to an invitation to see working appliances at work.

New York may have another "still" truck show and other cities may hold them for a year or so, but among thinking men in the business the trend is away from this sort of promotion and toward something more in harmony with the truck's place in the scheme of things. And the "working" show is the most logical suggestion yet brought forward.

The promoters of this year's New York show did their best to inject at least an artificial element of transportation into the show with a program of lectures and moving pictures. But the program got about as much attention as the one elaborately planned by the N. A. C. C. a year ago, when Lieutenant General Bullard, one of the big men of the A. E. F., as an instance, widely heralded as a speaker, talked to an audience of a dozen or two persons. The men in charge of this year's show found it difficult to induce even a small percentage of the small crowds to climb the stairs to the lecture hall, and finally resorted to

presenting speakers at the edge of the armory balcony, where they shouted down to small and ever-changing groups of people, half of them exhibitors, gathered on the tanbark below. At each armory was a band and at one a singer and out in the streets the army obligingly wigwagged at night with searchlights, to the immense delight of large audiences of small boys but with little result for the box office. Toward the end of the week the attendance was fair, better than that at the "national" show a year ago, but there were never any

listed, though several exhibitors said frankly that they would have obtained as many with a week's aggressive work of the sales force on the outside and more of them would have been exclusive as against the listing of names of men who probably talked with a dozen or more other exhibitors.

Several exhibitors characterized the show, like other shows they had been in, as "pure waste of time and money." Some others weren't as blunt as that, but they couldn't say just why they had taken space. These exhibitors said they didn't expect the show to

isfied if there were no further attempts to hold indoor truck shows.

Among New York dealers there was confidence that there will be a gradual return of buying with a gradual return of business conditions in the first half, or perhaps the first quarter of the year. *As to future shows, there was talk enough to indicate that the dealers are giving thought to the demonstration idea as the only apparently feasible aid to downright "plugging" in "putting the truck across."*

The show served to introduce two new trucks, the Clinton and Bridge-

How the Trucks Were Displayed at the New York Show



Although the show was called a "highway transport show," the exhibits, which were housed in two armories, followed in general the "still" truck show idea. This is a view of the floor in the main exhibit in the Twelfth Regiment Armory

throngs, as there never have been at any truck shows we know of within the confines of four walls.

As to business, most of the exhibitors admitted that they didn't expect much—and they were not disappointed. Truck sales have been exceedingly slow in the metropolitan territory for months, and a revival of commerce and industry to something near normal is the only thing that will restore truck dealers' revenues. Some sales were made, though a part of them were to prospects who had previously been brought almost to the point of signing, but wanted to "wait for the show." Some prospects were

get them anywhere—other shows hadn't—but, well, they just went in because they did.

Exhibitors issued free admission tickets to prospects and some of them conducted vigorous campaigns to get these tickets used, but with small success. There were some truck owners and quite a good many drivers in attendance at various times throughout the week and some business men in the market for trucks at a later date but at no time were salesmen kept at all busy answering inquiries. Two national sales managers among the few manufacturing executives present declared they would be perfectly sat-

isfied if there were no further attempts to hold indoor truck shows.

The trend away from mere exhibition of chassis was shown in the fact that there were 51 trucks with bodies to 66 chassis only, while body makers had nine displays of bodies only. Trailer models numbered 18. Selden aroused considerable interest with its exhibition of the 1877 "road wagon" alongside one of the 5-ton trucks and with a glass lined 500-ton tank mounted on a 2½-ton chassis for milk transportation. Steps led up to the top of the tank and it was lighted in-

side to facilitate inspection. The Interboro Hoist & Body Co. had a demonstrating exhibit which attracted considerable attention as did the Highway trailer.

The United States Army was generous in its co-operation with the show management, placing several ordnance and quartermaster vehicles in the show, but they helped only a little to attract the public *because they were still exhibits*. There was one of those

capacities: 1½ ton, 2½ ton, 4 ton and 6 ton. The respective prices are \$2,350, \$2,850, \$3,850 and \$4,500. The manufacturer is the Bridgeport Motor Truck Co., Bridgeport, Conn. All models are assembled of standard parts.

The 1½-ton chassis has a 4-cylinder Buda engine with 3¼-in. bore and 5¼-in. stroke, fitted with Eisemann magneto and Stromberg carbureter. The clutch is a Borg & Beck, the gearset a

either Wisconsin or Standard rear axle. The tires are 36 x 5 in. front and 36 x 5 in. dual rear. This chassis has a 170-in. wheelbase, and a weight of 8500 lb.

The 6-ton model uses the same engine as the 4-ton chassis. The rear axle is a Standard worm, and the tires are 36 x 6 in. front and 36 x 6 in. dual rear. The wheelbase is 172 in. and the weight 12,500 lb.

The following points are common to all models: Brakes mounted on rear wheels, pressed steel frames, half-elliptic springs, I-beam front axles with Timken bearings, Ross steering gears, gasoline tank under driver's seat, left-side drive, center control, and Hartford drive shafts. Standard equipment includes driver's seat, front fenders, side and tail lamps, horn and set of tools.

Clinton Has Four Models

A new line of trucks produced by the Clinton Motors Corp., 336 Avenue B, New York City, was exhibited for the first time at the show. All models have 4-cylinder, Continental engines, Brown-Lipe gearsets and Timken rear axles. The complete line is made up of four models as follows: 1½ ton, cylinder dimensions 3¾ x 5 in., wheelbase 150 in.; 2½ ton, cylinder dimensions 4½ x 5 ¼ in., wheelbase 170 in.; 3½ ton, cylinder dimensions 4½ x 5½ in., wheelbase 190 in.; 5 ton, cylinder dimensions 4¾ x 6 in., wheelbase 204 in. Copper tubular radiators without fins are used on all models. Prices on the various sizes have not been fixed as yet.

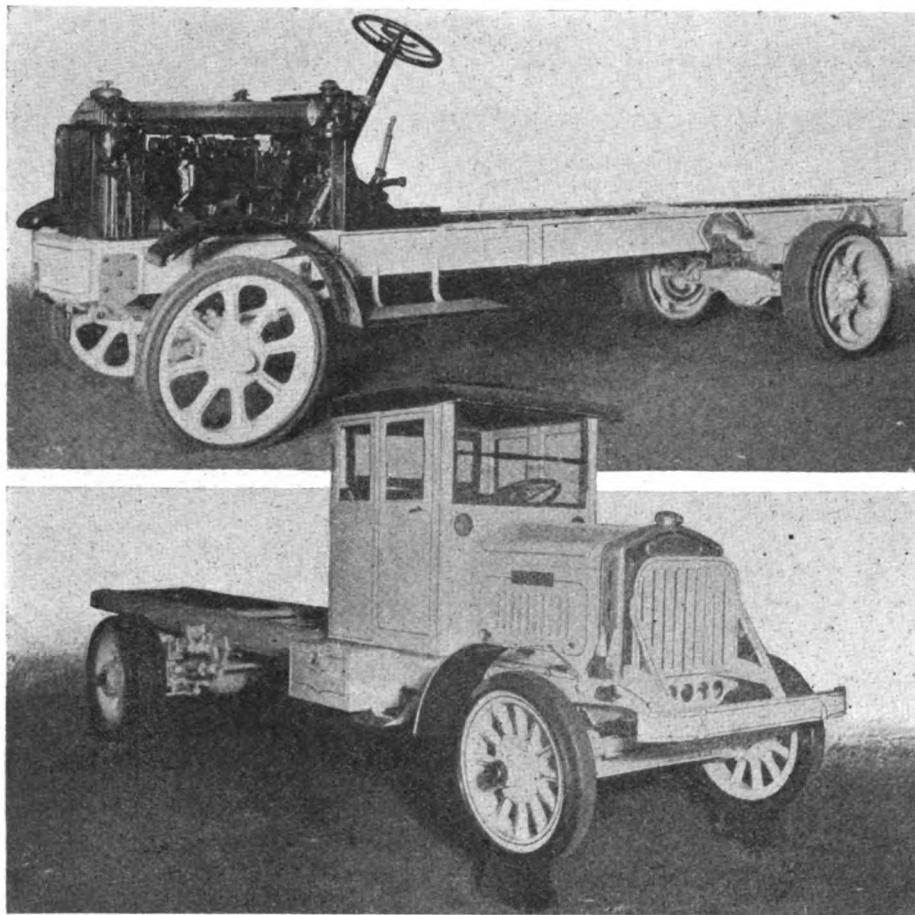
Bessemer Has a 4-Ton

This is one of the new models shown by an old manufacturer. The chassis price is \$4,285. The engine is a Continental 4-cylinder, 4½ x 5½ in. Ignition is provided by a Bosch magneto with manually controlled advance, and the governor is a Pierce. The carbureter is a Stromberg, fed by gravity from a tank under the seat. Other standard parts in the assembly are Borg & Beck clutch, Baker gearset with 4 speeds forward, Torbensen internal gear axle, Perfection springs, and Arvac universals. The front tires are 36 x 6 single and the rears are 36 x 10 single.

Ward-LaFrance Shows 5-Ton

Ward-LaFrance showed smaller models at the truck show last year and the 5-ton made its initial appearance at the 1921 show. The chassis price is \$5,590. The engine is a Waukesha, 4-cylinder with bore of 5 in. and stroke of 6¼ in., the cylinders being L-head and cast in pairs. Cooling is by wa-

Two Newcomers in the Truck Field



Above—The new Bridgeport truck, showing the 5-ton model exhibited for the first time at the New York Truck Show this year. The line covers four models made by the Bridgeport Motor Truck Co., Bridgeport, Conn. Below—The new Clinton produced by the Clinton Motors Corp., New York, which appeared in four models. The one shown is the 5-tonner

big Christie tractors, which runs on tracks in hard going and on wheels on the highway, the tracks being detachable. The tractor served as a mount for a 155 mm. gun. It is easy to imagine the crowds this would have drawn could it have been put to work in a field somewhere, with an imitation shell hole to crawl in and out of. But parked in the armory the big thing prompted only passing inspection.

Four Bridgeport Models

The Bridgeport line consists of four models with the following rated ca-

3-speed Cotta, and the rear axle either a Wisconsin or a Standard Parts Co. Wood wheels fitted with 35 x 3½ front and 34 x 5 rear, solid tires, are standard equipment. The chassis weight is about 3850 lb.

A 4-cylinder Buda engine with 4¼-in. bore and 5½-in. stroke, 4-speed Cotta gearset, and Sheldon rear axle are used in the 2½-ton model. The tires are 36 x 4 in. front and 36 x 7 in. rear. The wheelbase is 156 in. and the chassis weight about 5000 lb. The 4-ton model has a 4-cylinder, 4½ x 6 in. Buda engine, 4-speed gearset, and

ter, using a Long radiator, the water being circulated by a centrifugal pump. Ignition is by a Bosch D-U-4 magneto. A Westinghouse two-unit starting and lighting system is installed at an extra charge of \$120. The standard parts on this truck include a Zenith carbureter, Brown-Lipe clutch and gearset, Timken worm-drive axle, Ross steering gear and Merrill spring.

Rainier Shows Two New Models

The Rainier Motor Corp. showed two new additions to the line, a $3\frac{1}{2}$ and 5-ton. The price of the smaller model is \$4,500 and of the larger \$5,250. Aside from the tire sizes both trucks are exactly alike in specifications, the parts differing only in size where more weight or strength is required in the larger model. The tire sizes on the $3\frac{1}{2}$ -ton are 36 x 5 front and rear. On the larger model the size is 36 x 6 both front and rear.

Continental engine is used on both models, this being 4 cylinder $4\frac{1}{2}$ x $5\frac{1}{2}$ in. with cylinders cast in pairs. The standard parts on both models include Zenith carbureter, Brown-Lipe clutch and gearset, Timken worm drive axle, Ross steering gear and Spicer universal clutch.

Balsa Wood Refrigerator Body

A new refrigerator body constructed of Balsa wood was one of the innovations. This wood is very light, being much lighter than cork and was first brought to public attention at the motor boat show last year. This refrigerator body is constructed without supports and weighs but a fraction what the old style bodies weigh.

Romon Chassis Oil Lubricator

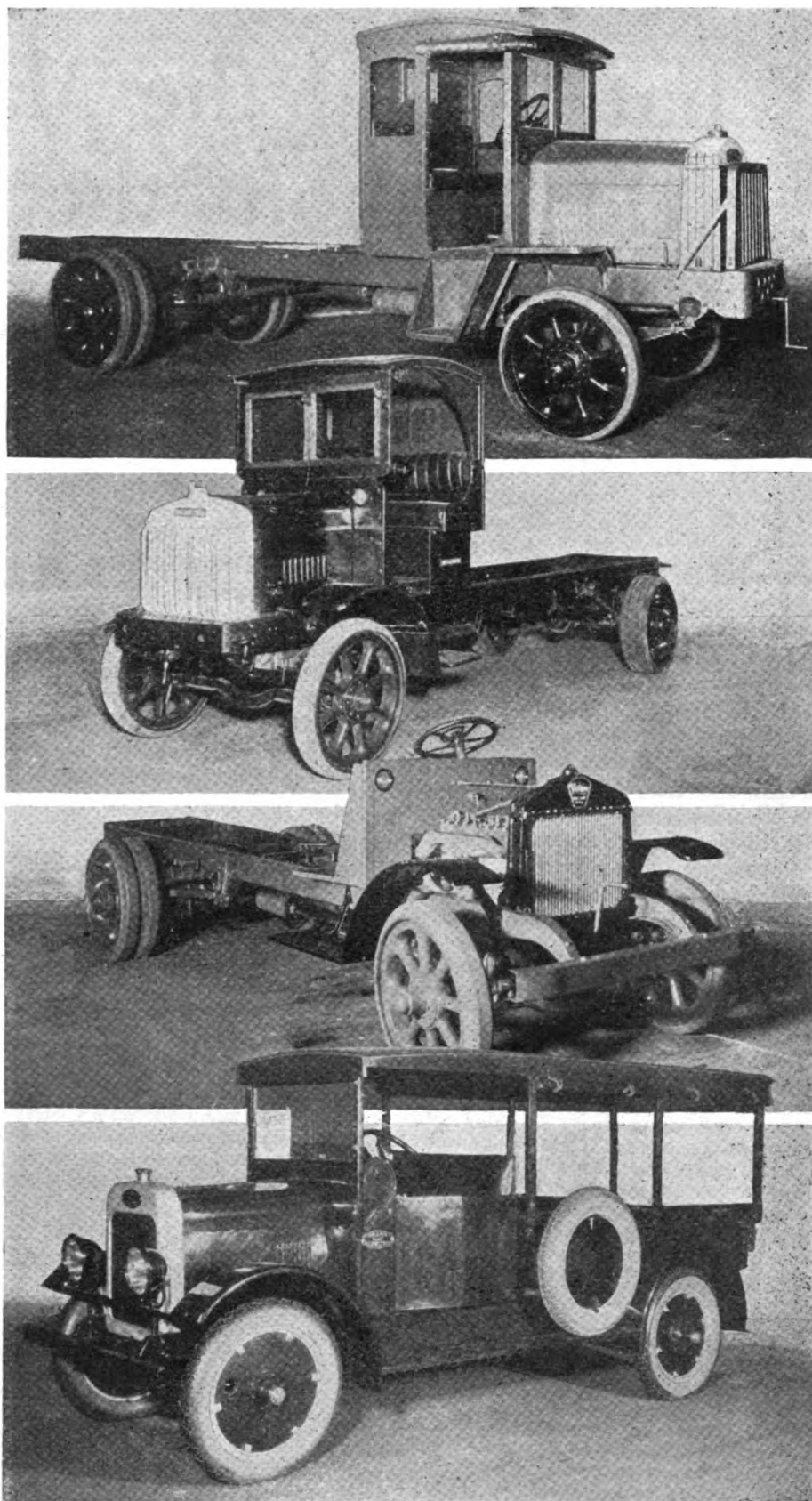
The Romon was exhibited for the first time at a show and the display showed the application to motor trucks. This device has been described before in Motor World, but as applied to passenger cars.

Another Brockway

At the show it was learned that another Brockway, a $\frac{3}{4}$ -ton model selling for \$1,750, will be put on the market this month.

List of Exhibitors

Truck exhibits were: Atterbury, Bessemer, Vim, Service, Sandow, Brockway, Gramm-Bernstein, Transport, Clydesdale, Jumbo, Clinton, Nash, Rainier, Kelly-Springfield, Moline, Indiana, Ward-LaFrance, Reo, Federal, Parker, Selden, Corbitt, Bridgeport, Riker, Fulton. Trailer exhibits were: Highway, Adams, Warner, Trailmobile.



Four Makers Add New Models

Considerable interest was shown by those attending the New York truck show in the four new models introduced as additions to established lines. Showing in this illustration, from the top downward in the order named, are: Ward-LaFrance 5-tonner, Bessemer 4-tonner, Rainier 5-tonner and the Gramm-Bernstein 1-ton model

What Would the Manufacturer Do Without the Jobber?

He Would Find His Distribution Costs Mounting with Disheartening Rapidity, Says a Jobber, Answering a Manufacturer's Complaint of Lack of Jobber Co-operation—Some Facts About the History of the Jobbing Business and Its Usefulness in the Present Day Plan of Automotive Equipment Marketing

THE charge of a manufacturer that automotive equipment jobbers participate in profits without helping to create demand has drawn the answering fire of a jobber. The letter of a manufacturer in last week's Motor World is answered this week by O. R. McDonald, second vice-president and general manager of the Times Square Auto Supply Co. of New York. McDonald suggests that the manufacturer who thinks the jobber is a parasite undertake selling direct to the dealer and then see what happens to his costs of shipping, canvassing for sales and handling collections.

In an interesting letter McDonald tells how the jobber came into being, how he has progressed from a mere warehouseman to an aggressive selling agency and how his system of handling stocks, sales and collections in intimate contact with his trade has become an important factor in equipment merchandising. In this description, of course, McDonald is discussing jobbers who are that in fact as well as in name. He thinks that if manufacturers would seek to develop upwards of a hundred real jobbers throughout the country and quit selling at wholesale prices to several hundred dealers who do no actual jobbing work the entire trade would be benefitted.

Following is McDonald's letter, addressed to Motor World:

YOUR manufacturing correspondent writes a very interesting letter in your issue of Jan. 5. Some of the things he has deduced from his personal observations at the various shows held this season would be serious if true.

It is not my purpose to enter into any word battle with this manufacturer, nor with any other, but this letter does give me an opportunity to say some of the things to manufacturers which should not need to be said.

Our correspondent recognizes but four steps in the sale: The manufacturer, the jobber, the retailer and the consumer, and from this standpoint the jobber becomes just what he has always been, the warehouse for the convenience of the trade, rendering equal service to both the manufacturer and the trade in the distribution of merchandise.

This warehouseman (of which I am informed by important manufacturers in this line there are some 650 or 700 in the United States) has no selling problem. He is not in business for the purpose of selling merchandise; he is in business for the purpose of warehousing merchandise, and merchandise in his stock is just exactly the same as merchandise in the manufacturers' stock, except that it is nearer the dealer and, consequently, more available to him.

In the beginning, or the genesis of

business, the stocks which were shipped to the jobber were consigned. He received a certain percentage for overhead and a profit for distribution of merchandise, very much the same as the general warehouse is now operated. In those days the manufacturer did the selling and the manufacturer's salesman drew on the nearest stock. After a while, the business developed to the point where one man would make a specialty of warehousing grocers' products, or dry goods, boots and shoes or drugs, and so on throughout the various lines.

Shortly, some manufacturers conceived the idea of having certain of their men use the warehouse as a headquarters and, gradually, through a process of development, the warehouseman took over the salesmen of the manufacturer, because it was manifestly cheaper to use one corps of salesmen to sell all of the products in storage in this particular place than it was to use a separate corps of salesmen for each product or for one line of products.

From this it was only a step to changing the method of making the transfer of goods take the place of consigned stock. This, naturally, greatly reduced manufacturers' carrying charges and enabled them to have some one on the ground in each distributing center who could determine the capacity of the community that he served for the absorption

of the particular product in question.

It was at about this point that the automotive industry started and, in consequence, the manufacturers engaged in this industry have in a great measure lost sight of, or never knew, the original province of the jobber.

He is entitled to a just compensation for the service he renders to the manufacturer. *His greatest service is in shortening the time of delivery of merchandise to the dealer and reducing the manufacturers' carrying charges, both for merchandise in storage and for accounts receivable.* The compensation now granted to jobbers in this trade just about does this, leaving the jobber from 3 to 5 per cent net on his turnover, whether 3 or 5 per cent being dependent very largely on his ability to judge conditions, cut down investment, increase turnover and collect outstanding accounts promptly and without loss.

There is another development in this trade which our correspondent has failed to recognize. For convenience I will call him the distributor. The distributor does all that the jobber does and in addition to this he *does create a demand*, he *does sell merchandise* and, naturally, in doing so incurs expenses far beyond those incurred by jobbers, and these expenses must be met by a longer discount from the manufacturer.

This is not generally recognized by manufacturers, which is obviously the reason for the complaint upon the part of some of them regarding lack of selling co-operation.

This increased compensation to the distributor is more than offset on the manufacturer's books by the saving he is enabled to make through increased production and consequent lower manufacturing cost, in advertising, direct selling, missionary work and dozens of other things that the manufacturer without this auxiliary sales organization must incur.

There are probably fifteen distributors of automobile supplies in the United States. Certainly not more than twenty-five could possibly lay claim to the title.

It would be possible for manufacturers to develop 75 to 100 distributors in the United States, but the only way it can be done is by the elimination of a part of the 650 or 700 which they now sell, thus making the lines of some value, in volume, to those who have the ability to really distribute them. As the matter now stands, the distributor and the legitimate jobber are compelled to compete with dealers buying on the same terms, and many lines are not worthy of support or effort for this reason.

Now let's see what would happen in the automobile supply business if the manufacturer sold direct. Let's have a few facts in the first place. In any list of dealers and garage people to whom jobbers and distributors sell there will be a total of 85 per cent of changes in the course of a year, not that 85 per cent of the firms will change hands—because some of them will change hands a dozen times and others not at all—but there will be in a list of 1000 names 850 changes.

I wonder if this fact alone means anything to our manufacturing friend who would, of necessity, be doing business from not to exceed three points in the United States, even assuming he had

credit facilities in all three places and not a centralized credit department. Investigation of this phase of the business will open the eyes of most manufacturers.

There are about 22,000 items in the average jobber's catalog, probably 1800 different lines of goods, that is, the jobber buys goods from 1800 different concerns. In order to supply the needs of his trade, each one of these 1800 manufacturers would of necessity incur

whereas now he can handle anything that his trade requires and do it on a very nominal investment, being at the same time sure that he has within 24 hours of him a source of supply from which he may get anything of which he may be temporarily short.

In 1920 there were thirty-one manufacturers carrying advertising direct to the consumer, for the purpose of creating a "consumer demand" for products which were sold through jobbers and distributors in this line; of the thirty-one there were only seven who furnished any means whereby the "consumer demand" thus created could be connected up with the consumer's source of supply, which is the dealer's stock.

Most advertising done by manufacturers is evidently done solely with the idea of impressing the jobber and the dealer with the amount of money that is going to be spent and not with any notion of what results in sales are going to accrue to the manufacturer. The writer's notion of the reason for this is that very few manufacturers seem to have very much of an idea of the steps that are necessary in a sale. In other words, their inclination is to cease to worry when the jobber has the goods, except in a few cases where it ceases after space

has been contracted for in national periodicals.

At this particular time, referring to general conditions over the territory, if this manufacturer would take the trouble to investigate the amount of book accounts being carried by the various jobbers with whom he does business he would answer a whole lot of the questions he has asked and he would entirely remove from his mind the erroneous idea that the manufacturer takes all the risk, or that he does most of the investing.

Relative to that part of the article that refers to the delivery of merchandise during the past year, which is the real reason for the condition in which the

(Continued on page 51)

Concerning the Jobber—Is he cutting a swath or just filling a niche?

A Manufacturer's Letter Says:

- 1—If the manufacturer has to create the demand there is no reason why he should not have all the profits.
- 2—If the manufacturer does all the creating, all the investing and takes all the risk of a falling market, why should he waste time with jobbers whose first thought is of price guarantees?
- 3—Jobbers have got to put their shoulders to the wheel and give the manufacturers some business. They have made money. . . . They must see that the manufacturers keep their plants going.

A Jobber's Letter Says:

- 1—The jobber's greatest service to the manufacturer is in shortening the time of delivery of merchandise to the dealer and reducing the manufacturer's carrying charges, both for merchandise in storage and accounts receivable.
- 2—The manufacturer in his letter fails to recognize the development of the jobber who has become a distributor, who creates demand and sells goods, incurring expense far beyond that of the warehouseman. Such expense must be met by longer discount from the manufacturer and because this need is not generally met it is only natural

that jobbers should curtail their selling activities, a condition which gives rise to the manufacturer's complaint of "lack of co-operation."

- 3—If manufacturers would sell only to real distributors and develop 75 to 100 of these merchandisers they would make their lines of value, in volume, to houses with ability really to distribute them. As the matter now stands distributors are compelled to compete with dealers buying on the same terms and many lines are not worthy of support or effort for this reason.
- 4—Investigation of the credit phase of selling to the dealer would open the eyes of some manufacturers as to what it costs the jobber to perform this service for the manufacturer.
- 5—Jobbers have not lost any of their aggressiveness in the last few months and there is no inclination to withhold buying except insofar as it is necessary because of unbalanced inventories and accounts receivable, due in many cases to delayed shipments from the factories in 1921.
- 6—The steps of a sale are: Manufacturer to jobber or distributor, jobber to dealer, dealer to consumer and each party to the transaction should be paid for what he does and in proportion to what he does.

the same expense in the distribution of their merchandise. The selling cost covering salaries and expenses on merchandise on this line to-day is about 9 per cent, and this, you understand, is when the jobber's representative can sell the dealer any one or any assortment from his 22,000 items. Naturally, the selling cost of the individual manufacturer, on account of the shortness of his line, would be materially increased were he selling direct.

The manufacturer could, of course, by superior salesmanship overload the dealer with his particular item, reducing the dealer's turnover to once a year, and thus make it impossible for him to handle more than a dozen or fifteen items,

Editorial Observation

Customers—Are You Going to Procure Them or Secure Them?

Some Thoughts About Service and Success

CONSCIOUSLY or unconsciously every automotive merchant has fixed upon the 1921 shows as the starting point of a new era. "Old methods must go," a phrase that attained the dignity of a general impression in the final months of 1920, has become a conviction. New methods must be developed—but how?

There is only one foundation on which they can be developed: A recognition of reward as nothing more than the *end* of business and a simultaneous recognition of service as the *means to the end*.

The humorously sarcastic philosopher, Elbert Hubbard, once said that "We grow only when we are green and when we think we are ripe we are beginning to get rotten."

During the spending days that followed the armistice a good many businesses began to think they were ripe. But when the commercial pendulum reached the limit of its course on the buying side of the clock of time and began to swing back toward the selling side there were business men—many of them—who frankly confessed that there was more than words in what Hubbard said. They realized that ripeness, in business as well as in fruit, is something only of the moment. They realized that their businesses could live only in the green state, in the ripening, as contrasted with the ripe state. And they realized that the juice of the ripening fruit, be it merchandise or labor, is service.

The business man who would keep his business in the ripening, growing stage, will find the answer to his problem in two words. He must have customers. Is he going to *procure* them or *secure* them? The answer to the question is in the quality of his service.

It will be readily admitted that the shows will procure customers for the automobile business. But the shows of themselves will not secure customers. Nothing but satisfaction will do that and the father of satisfaction is service.

The automotive merchant has only two things to sell—his goods and himself. His goods have two parts—quantity and quality. When he sells himself

—the service behind his goods—he sells only one thing—quality. The quantity and quality of his merchandise are something that the dealer cannot control; he relies upon the manufacturer to deliver those. But the quality of himself is his problem exclusively.

A. F. Sheldon has named four foundation stones of the structure of success—Know Yourself, Know Your Business, Know the Other Fellow, Apply the Knowledge.

After the shows have procured business for dealers and they enter upon the task of securing it they could do no better than to take unto themselves these four points of Sheldon's. In reorganizing their businesses they must first know themselves—make themselves big enough for their jobs. Then they must know their businesses, which means knowing not only the goods they sell but the employed men and women who do the detail of selling—which entails making these men and women big enough for their jobs. And when it comes to knowing the other fellow the entire organization, employer and employees, must make good—and those who can't make good must give way to those who can. It's a big job, selling an organization to the buying public and now is the time to scrutinize the entire force from top to bottom, getting the round pegs in the round holes and the square pegs in the square holes and casting out the pegs that won't fit any hole. And applying the knowledge—the whole thing gets us right back to the Golden Rule. *Securing customers, as against procuring them, is nothing more nor less than selling service which sells confidence which sells satisfaction.* And the key word of all key words in business, by which one can take reward only when he has given service, is honesty.

These are hard days for those who "got theirs" while the getting was good—we call them profiteers. And they are almost as hard for those who, without profiteering, "got theirs" by merely procuring customers who bought of them because they couldn't buy somewhere else.

The average buyer, of anything, will go where he

can buy most cheaply—other things being equal. But the average buyer puts these *other things* above cheapness because these other things condensed into one word are *satisfaction*. This is the reason that those who make and sell cheap things have never been

able to monopolize business—and never will be able to. In those *other things* is the merchant's opportunity. As he develops them so will he develop sales.

The dealer's opportunity—from the shows on, from now on—is plain. He can serve—and succeed.

Isn't a Life Worth Ten Dollars?

EVEN a world that is weary of appeals for money cannot turn a deaf ear to the pleadings of the children of Central Europe for clothes to keep them from freezing and food to keep them from starvation. These pleadings, brought before the American public by Herbert Hoover, already have brought to the relief of the sufferers several million American dollars, but the fund is still far from adequate. Not only people of wealth, not only residents of the great cities, but all men and women who can give even small sums, in so desperate a cause must place their names on the Hoover Honor Roll if the world is to be saved from an after-war catastrophe hardly less appalling than the war itself.

The Hoover committee reports 3,500,000 children in direct need in the Central European countries

where agriculture, industry and commerce have hardly begun to recover from the destruction of war. The committee promises to keep a child alive until the next harvest for every \$10 contributed and to devote every dollar of the fund to actual relief work—and the American people have learned to respect Hoover's promises.

The need of funds is immediate and the cause perhaps the most appealing ever presented to a humanity-loving people. We urge our readers to give prompt thought to their ability, yes and their obligation, to invest in the life of a child or many of them and to send checks at once, in sums of \$10 or multiples of \$10. Checks should be made payable to Franklin K. Lane, Treasurer, European Relief Council, 42 Broadway, New York City.

Profits in Truck Repairs

THERE is an interesting suggestion for the trade in the effort of the Acason Motor Truck Co. to get orders from truck owners for reconditioning of their vehicles at the factory. In a form letter sent to owners the manufacturer states its qualifications to do the work and declares that if a truck is reconditioned at proper periods its life will be almost indefinite.

It goes without saying that this manufacturer would not have gone into an undertaking of this sort unless there was real need for this sort of attention to a great many trucks and unless there was a fair chance of bringing to the factory gates a considerable amount of business. The manufacturer's campaign has its lessons for truck dealers, many of whom have equipment for reconditioning work and who might tide themselves over a dull period by bringing a volume of it into their shops. The present would be an ideal time to recondition many trucks thrown into temporary idleness by the suspension or curtailment of manufacturing or commercial activities and the right sort of approach by dealers would sell this sort of work to many owners.

And the selling of this work, which means selling satisfaction of the owner in his truck, would prepare the ground for later sales of new trucks. It would be ideal missionary work for a dealer establishment at a time when sales of new merchandise are limited, even in the face of the most aggressive selling effort.

Getting trucks into the service station for recon-

ditioning can be accomplished by advertising, by individually addressed letters to owners and by personal canvassing, and there are undoubtedly many organizations, slowed up by slack business conditions, where the latter plan could be carried out without interruption of work in other lines.

Is the plan worth trying?

In a large Eastern city a business man, five years ago, owned a certain make of high-priced automobile. He sold the car and has not since been an owner. Despite this fact he gets from the dealer selling this car at the opening of every season a letter urging him to bring it in for service attention. How many dealers are wasting time, stationery and postage in this fashion?

A campaign "to make people buy and buy safely" has been undertaken by the Federal Advertising Agency of New York, which offers manufacturers free use of copy for a series of advertisements intended to build public confidence in trade mark merchandise. Such a campaign is a progressive step in educating the public to know and respect merchandise of proven worth.

Somebody said the automobile industry ought to throw away its blue glasses and try looking through pink ones. Isn't that just the matter with some things in the business—too much pink glass gazing? Why not try clear glass vision and steer all the more safely for the destination because we can see the stones in the path?

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD'S legal editor to discuss the question?

Jersey Lien Law Favorable

Editor Motor World: We would like to inquire about the best mechanic's lien law that you know of in any State, also the best title deed law which you know of in any State, in connection with automobiles.

We understand that Pennsylvania has a law whereby the owner of an automobile or truck must have a deed or title to this property very similar to the deed to a piece of real estate. We think this is a very good law to help break up the wholesale stealing of automobiles which we are having to contend with to-day.

I understand that one of the Eastern States, I think Massachusetts, has one of the best mechanic's lien laws.

If you will please give us this information and where we can obtain a copy of the draft of these laws we will very much appreciate it. We are going to make an effort to have our State laws improved along this line.—R. D. Co., Wheeling, W. Va.

Answer—What you apparently mean is a garageman's lien law. The one most favorable to garagemen is the New Jersey law, which reads:

"All persons or corporations engaged in the business of keeping a garage or place for the storage, maintenance, keeping or repair of motor vehicles, and in connection therewith stores, maintains, keeps or repairs any motor vehicle or furnishes gasoline, accessories or other supplies therefor at the request of or with the consent of the owner or his representative, whether such owner be a conditional vendee or a mortgagor remaining in possession or otherwise, has a lien upon such motor vehicle or any part thereof for the sum due for such storing, maintaining, keeping or repairing of such motor vehicle or for the furnishing of gasoline, accessories or supplies therefor, and may without process of law detain such motor vehicle at any time it is lawfully in his possession until such sum is paid.

"Any person or corporation acquiring a lien under the provisions of Sub. 1 of this section shall not lose such lien by reason of allowing the motor vehicle or part or parts thereof to be removed from the control of the person or corporation having such a lien and may, without further process of law, seize the motor vehicle or part or parts thereof wherever the same may be found within the State of New Jersey.

"All such property so held by any such garage keeper or automobile re-

pairman shall, after the expiration of thirty days from the date of such detention, be sold at public auction upon notice of such sale being first published for the space of two weeks in some newspaper circulating in the city, borough, town, village, or other municipality in which such garage or repairshop is located, also after five days' notice posted in five of the most prominent public places in such municipality, and the proceeds of such sale must be applied to the payment of such lien and the expenses of such sale, and the balance, if any, remaining shall be paid to the owner of the property or his representatives. If such balance is not claimed within sixty days after such sale then the balance shall be paid over to the overseer of the poor of such municipality for the support of the poor."

You can procure a full copy of the Pennsylvania law you refer to by writing to the Secretary of State of Pennsylvania. Both of the laws you mention are well worth pushing.

A Mississippi Lien Case

Editor Motor World: We would like to know about the labor lien law in Mississippi and would like to know if we can take possession of a car after delivery and if so how long after—for repair to car and parts furnished. C. C. K., Cockrum, Miss.

Answer—Garage and repairmen have a lien in your state on labor performed and materials furnished in repairing motor cars under Code of 1906, Sec. 3075, and may retain the property in their possession and sell it. It was decided in the case of J. A. Broom & Son vs. S. S. Dale & Sons, 67 Southern 659, March 15th, 1915, that this lien is superior to the lien of the seller of a car on a conditional bill of sale.

Used Car Dealers Not Affected

The Supreme Court of North Carolina recently decided that Pub. Laws 1919c. 90 par. 72, requiring automobile dealers to procure licenses where the manufacturer has not been licensed to sell automobiles in the state, and section 85 denouncing the sale of automobiles without such license as a misdemeanor, did not prior to the amendment of the former section at the special session of the legislature, held late in 1919, apply to independent second hand automobile dealers. State vs. Barber 104 S. W. 760.

A Question of Delivery

Editor Motor World: We do a large taxi and baggage business. Some time ago we delivered a trunk from a customer's house to the railroad station, giving no claim check.

The party came to the station next day to check the trunk out, and the trunk could not be found. The trunk might have been stolen on the platform or checked out by the baggage man by mistake, as was done with another trunk that day, and which trunk was traced to a distant city and returned.

Could they hold us responsible for the loss of the trunk as we fulfilled our contract of delivering the trunk from the house to the station?—Taxi Service, Fitchburg, Mass.

Answer—Of course, if you can prove a "delivery" on your part according to your instructions, and if you can prove that you "fulfilled your contract," as you express it, there would be no liability on your part. That, however, is the question. Did you fulfill your contract? Did you make a proper delivery? There are not enough facts set out in your letter to say. In your position I would simply sit back and if a claim were made turn the matter over to local counsel with all the facts of the case.

May Repossess This Car

Editor Motor World: We should be pleased to receive full particulars regarding the labor lien law of New Jersey.

We have a case of which we are in doubt, and it is as follows:

A party had a collision with a trolley car in May, 1919, and after repairs had been made paid us part of the bill. The balance was to be paid in a month.

Before balance was paid the above party sold his car to a corporation of which he also became a member, and in turn the corporation sold the said car. Now we would like to know if we can take the car from the present owner and hold same until balance has been paid.—R. L. B., Paterson, N. J.

Answer—You will find the New Jersey Lien Law set out in full in answer to another inquiry on this page. This law has been held to be constitutional by the New Jersey courts. Under it, strange as it may seem, I think you might be able to retake the car from the perfectly innocent person who now owns it, as you had the lien when he bought it, and I suppose your courts would say he had constructive notice.

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Getting Most Out of Reading

J. P. Bittner, 420 West 121st Street, New York, tells in this letter how he makes a permanent file of the merchandising ideas he reads in Motor World.

Editor Motor World: I hope that Motor World may be able to give its readers at least the gist of the following article, which I offer as an attempt to give something in exchange for the many good ideas I have received from this journal.

This is a day of rather careless reading. A man cannot, however, afford to read his trade journal as casually as he reads his newspaper. Often too, if the ideas from such journal do enter his mind he or his organization, are not in a position at the particular moment to consider the idea and apply it, and by the time they are ready for it, it has very likely slipped from his memory.

Now for a remedy.

BUY A BLUE PENCIL. Begin with this issue of Motor World. Start with the first article. Read it through, and as you do this, analyze the article with the thought in mind—"What ideas does this article offer me for present and prospective use?" If you find a paragraph or sentence that suitably sums up the idea as you see it, underline it with a blue pencil. If you do not find such summarization, form one for yourself. Write it in the margin. It need not be complete sentences—just words or phrases—but enough to enable you to recall it fully when you wish to use it.

Go through each article in this manner. Then get a loose leaf binder—subdivide it into sections such as car sales, truck sales, servicing methods, accessory sales, etc. Make it fit your business both as to present conditions and future extensions.

Then spend a quarter of an hour typing these marked items under their respective headings in the binder—or if you have a careful stenographer, let her do it. You will be surprised to see to what an extent you will be able to condense the material with a little practice—usually about an aggregate of three pages to the issue. The remainder is in your memory—waiting to be recalled when you review the notes.

This *digging out the idea* offers a number of benefits. 1—It provides an extremely accessible reference. 2—It places the mind in a working attitude, and being in this attitude you are more likely to connect up the idea given, or the solution of the problem in the narration, with analogous problems of your own. 3—You don't miss any of the points by this intensive reading which the

writers have attempted to convey to you. A great many people think they read thoroughly—but just try this little experiment—pick up a two weeks old copy of Motor World, read it through in the manner above stated—usually you will find at least a half dozen important points which you overlooked in your previous reading, not to speak of those which have flitted from your memory since. 4—Usually the men of your organization have enough similarity of viewpoint with yourself to interpret your notes. After you have these well started, place this binder of summarizations where the men are likely to run onto it during a possible leisure moment. If they are not possessed of the habit of reading trade journals it will furnish them with selling and other ideas, and will eventually build up an incentive in them to read for themselves in search of like material. 5—The mere fact that you review the ideas several times in this procedure, and associate them with more of your own experiences, tends to fasten them more securely in your memory.

In conclusion—get the *ideas*, the pencil and the binder.

Not a "Game"

In this letter a Southern jobber pleads for the elimination of "game" in referring to the automotive industries and greater regard for the importance of the industry in business.

Editor Motor World—I believe that the curtailing of loans to many branches of the automobile industry by the banks of our country has in a sense been a great boost to the business as a whole, regardless of the fact that it has without doubt worked a hardship in some cases.

One feature which I am sure is better appreciated to-day is the stability of this tremendous business when operated without the assistance which we have heretofore learned to lean upon. After giving the present situation careful consideration there is one term which is so often used and which, in my opinion, has proved more detrimental to the organization as a whole than any other one thing, and this term has again and again been used by manufacturers, automobile dealers, wholesale supply houses, accessory houses, garage and repair shops, and used so frequently that the general public as well as our financial institutions have almost come to believe that it is "A GAME." You know there is such a thing as talking a thing until we ourselves begin to believe it.

As partial evidence of just how much of a GAME this great business of the

United States is to the average person is evidenced by the fact that we have around 161,441 or more automobile repair shops, garages and service stations in the United States. These serve over 6,000,000 automobile owners. Out of this large number of repair shops, garages and service stations it is appalling to me to realize that perhaps less than 50 per cent of them fully understand the mechanism of the automobile, and in the face of such facts one can hardly wonder that the public should look upon this business as a GAME.

I have made careful personal inquiry from many sources, but I am as yet unable to say that I know of any instance where a banking institution has incurred a loss by lending assistance to this industry in this section of the country.

On the other hand we have but to read the daily papers from almost any section of the country to know that banks have been forced to close their doors on account of lending too heavily on what is known as staple commodities, among which might be mentioned rice, sugar, wheat, etc. Yet banks to-day consider loans to such concerns good business, and not even the Federal Reserve Bank in the face of such failures seems to take much cognizance of this condition.

It is, of course, all right for us as individuals to think that the other fellow should get his house in order and be known in his community as a business institution; but I assure you that there is a moral responsibility on the shoulders, not only of every industry, but every INDIVIDUAL associated with the automotive industry and its branches to spread from day to day such propaganda as will, in the least possible time, bring the general public to realize that it is a BUSINESS and not a game. When we have been successful in this, then and not until then will the financial interest of this country look upon and treat it as a business, and one worthy of financial assistance. When we have attained this I do not believe that we will thereafter ever see the day when the Federal Reserve Bank or any other financial institution of this country will hesitate to rediscount automobile paper. To the contrary, I think that the matter of credits will then be weighed in the same balance as any other legitimate paper, and in most cases be preferred by financial institutions as a better risk.

The writer will appreciate reading your views of the matter in some future edition of Motor World and stands ready at all times to co-operate to the best of his ability for the betterment of the business as a whole.

A Department of BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 174

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Lubrication Schedule for Saxon Six Cars

Points to Observe in a Routine Lubrication of the Entire Car

THE operations given in this schedule cover the points that should be gone over on the Saxon Six when the car comes into the shop for lubrication of all parts. In general, the parts should be cleaned before lubricating.

Parts Requiring Oil

The oil in the engine crankcase should be kept at the middle mark or hole on the depth gage. If the oil is thick or gummy, or has a very dark appearance, it would be best to drain it out and wash the crankcase out with kerosene or gasoline. The oil can be tested to find out whether there has been undue bearing wear by taking a few drops between the thumb and finger, rubbing the oil out. Undue bearing wear will be evidenced by tiny particles of shiny metal. This test will be more dependable if made after the engine has been run and the oil stirred up. After a time, these particles settle. After washing the lubricant out with either kerosene or gasoline, the engine should not be raced nor have a load applied for a few minutes so that the new oil will have a chance to work into the bearings and cylinder walls.

The speedometer driving gears will require a few drops of oil. The pedal hubs, clutch yoke bearings and torque yoke pins require 5 or 6 drops of regular engine oil each. The brake rod clevis pins and the gear shift rod clevis pins will require 2 or 3 drops of engine oil. Also place a few drops of oil on the accelerator button rod and spark shaft brackets, and also the spark and throttle control fittings and connections.

The Bendix worm shaft is to be lubricated with a few drops of engine oil, according to the recommendation made by the manufacturers. However, in the case of cars driving through dusty country, it is sometimes found better to squirt a shot of kerosene on the worm shaft, as this soon evaporates or is used up and the dust and dirt does not collect as would be the case if oil were used.

The brake equalizer shaft bearings

are lubricated with a few drops of engine oil, and the front starting motor bearings and Bendix bearings with light machine oil. The control shaft bearings and rockers get engine oil, the generator bearings light machine oil.

Parts Requiring Grease

One complete turn of the grease cup lubricates the steering knuckle, steering cross rod, steering gear grease cups, spring seat on rear axle and rear spring shackle bolts. The springs are to be spread and packed with graphite and grease. In case the springs show up very rusty, it would be advisable to disassemble them and clean the surfaces of rust before inserting the grease.

Taps and Dies

THE Better Mechanics article in the January 26 issue of Motor World will consider taps and dies from the shop viewpoint, taking up the various sizes, threads, types, methods of use, grinding, tables of tap drill sizes and other features. While this subject has been covered in Motor World a long time ago, it is felt that bringing the information up to date and broadening the scope of the article will appeal to our mechanical readers.

This article will be followed by others on different tools and shop equipment the last issue of each month.

The torque yoke cup should be given two complete turns and the rear axle brake lever shaft bearings are to be packed in cup grease. The distributor gear cup gets two turns, the timer shaft one turn and the front wheel bearings are to be packed by removing the hub. Before doing this, however, examine the parts for wear and breakage, cleaning the old grease out if necessary. The wheel bearings can be adjusted for play

either before or after packing, but it is much more convenient to do so before.

The following points only need attention every 2000 miles, but if the instructions call for a complete oiling and greasing, they should be gone over.

Fan hub—To be packed thoroughly.

Rear wheel bearings—Pack with grease.

Drag link ends—Pack with grease.

Universal joint—Remove the grease hole plug and boot and pack with as much grease as it is possible to get in, then replace the plug and boot.

Clutch thrust bearing—Pack with a grease gun.

Differential housing—Put in 2 qt. non-fluid oil.

Gearset case—Drain, flush with kerosene and put in 2 qt. lubricant.

Starter chain—Clean with kerosene and apply a mixture of graphite and oil.

Pinion and gear housing on starting motor—Pack with grease from a grease gun.

After a thorough lubrication of all parts of the car, the entire chassis should be gone over with rags and gasoline to remove all the surplus oil and grease. The car should then be washed well before returning it to its owner. If this is done, the appearance of the car alone will indicate to the owner that some work has been done on it. If it is not cleaned up, the evidence that work has been done is lacking and the owner may not feel as well satisfied with the job.

A test of the car before turning it back is also advisable. In any lubrication schedule it is almost invariably found that certain adjustments are necessary on account of wear, or bolts or nuts getting loose, and these points should all be thoroughly checked up. While no schedule of time has been worked out for the Saxon, there is no reason why records of the lubrication time cannot be kept and an average arrived at so that the owner can be given a flat rate on the job, including both time and materials.

Repairshop Shortcuts

No. 2810—Substitute Battery Leads—To connect a battery that has leads with set screw terminals to a car having taper terminals, two bolts are sawed off and screwed into the ends of the leads on the car, as shown in the illustration.—Herbert A. Kline, Sharon, Conn.

No. 2811—Removing Small Gears—The illustration shows how an ordinary gear puller is used to remove a small gear. By placing it in the vise as shown, it makes it impossible for the hooks to slip off.—W. M. Organ, Jr., Liberty, Tenn.

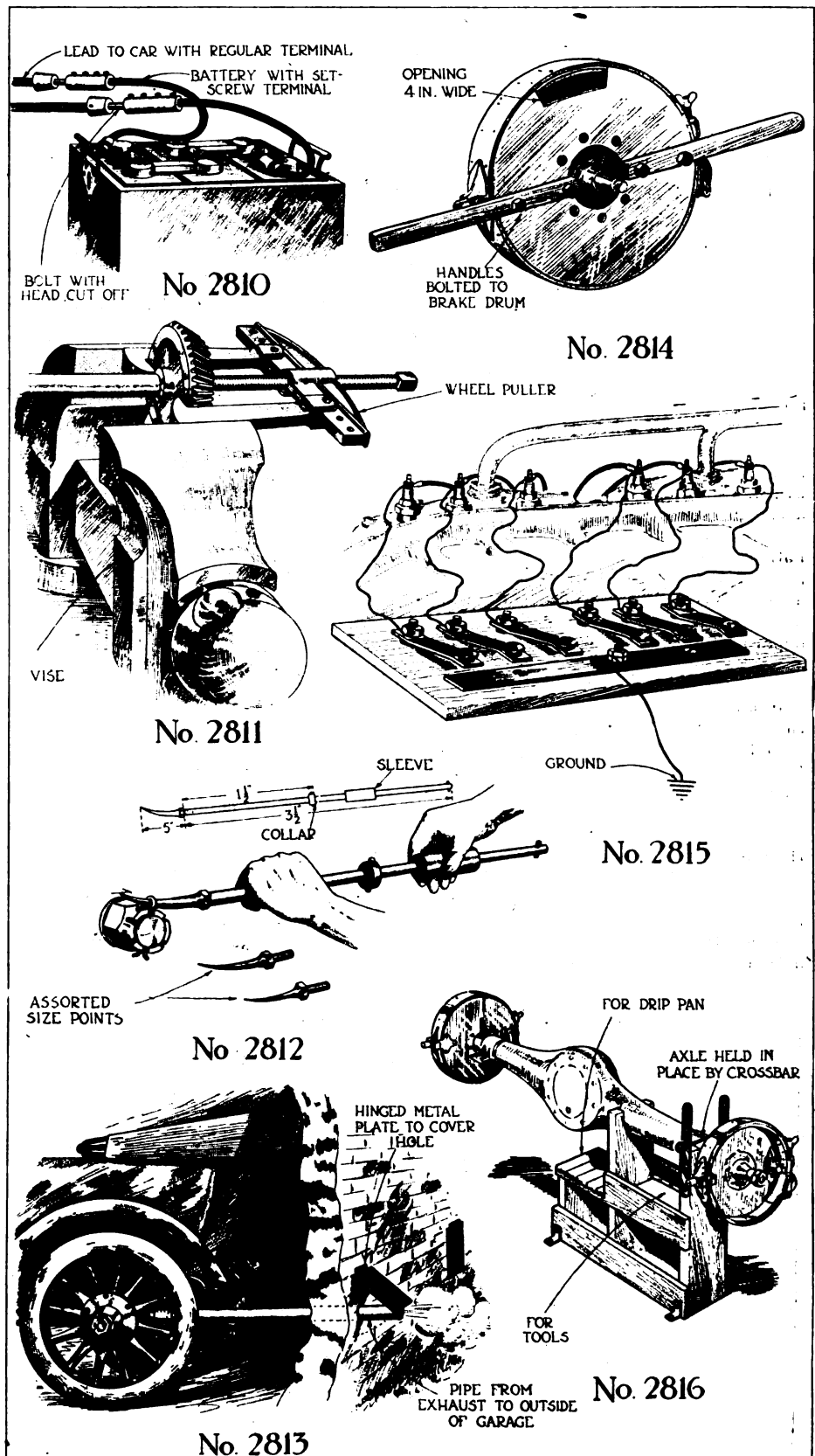
No. 2812—Cotter Pin Remover—This is a special tool for removing Cotter pins and its construction is shown in the illustration. Points of various sizes should be provided to adapt it to various sizes of cotter pins. When the sleeve is brought down hard against the collar the cotter pin is removed.—A. J. Faust, Springfield, Mass.

No. 2813—Removing Exhaust Gases—Holes are provided in the wall, back of each car in storage, and through this hole a pipe passes; one end of this pipe fits over the exhaust pipe on the car. A hinged metal cover which closes by its own weight is provided to cover the hole when the car is not in the garage.

No. 2814—Truing Up Brakes—An old brake drum with an opening 4 inches wide cut in it for inspection of the inner brakes is used to true up the brakes on a Dodge car.—H. C. Lane, Dodge Bros. Service Station, Detroit, Mich.

No. 2815—Spark Plug Tester—This is a device for testing each plug on an engine individually, by means of a key. Any plug may be short circuited independently of the other.—Charlie Howell, Brayton Motor Co., Pueblo, Colo.

No. 2816—Rear Axle Stand—The construction and use of this stand is shown in the accompanying illustration. It is approximately 2 feet high, or this dimension may be varied to suit the convenience of the user. It is made 5 or 6 inches longer than one-half the total length of the rear axle assembly in order to keep it from tipping over.—R. M. Barkdoll, W. E. Dinneen Garage, Cheyenne, Wyoming.



MAKE A DOLLAR

SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Service Salesroom Makes Service Profitable

*Building With Special Provision for Selling Service—
Owner Never Enters Shop*

SERVICE is not ordinarily considered as something that the dealer has to sell. Many dealers maintain a service department because they feel that they must have one in name at least, in order to sell cars. Their attitude is that when a car requires adjustment or repair, the owner will bring it in any way, so why bother to make him like it. To this type of dealer, the service department is a sinkhole which absorbs a considerable portion of the profits he makes in other departments of his business.

Service Should Pay

But there are dealers who are making the service department pay its own way. And they are going to as much trouble to sell service as they do to sell new cars. The service department to them is one of the most important and necessary features of their businesses. Because they have this attitude toward it, they are promoting service intelligently, and they are operating their shops without loss.

When the dealer sells a car, the transaction is conducted in the showroom

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

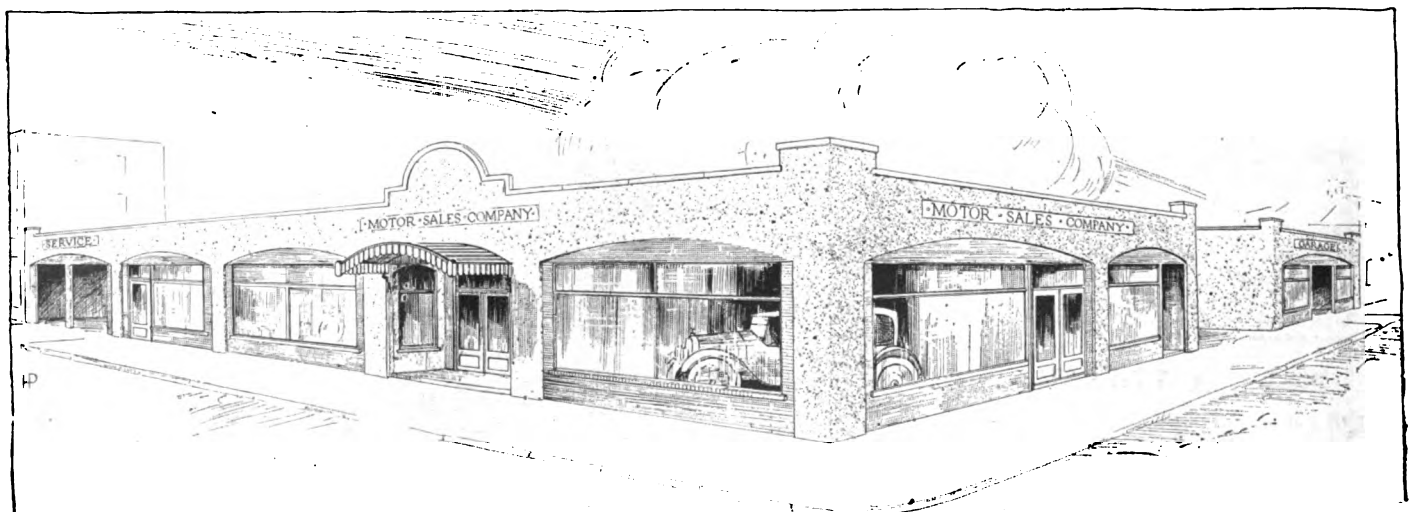
where everything has been done to make the customer comfortable. When he sells service, however, the customer drives into a shop that is often dark and dirty. Perhaps he is a little disappointed in the performance of his car. Isn't it probable that this difficult situation can be handled more satisfactorily in a room that is clean and bright and comfortable? If he is actually sold on the service work

to be done by a salesman, there is every likelihood that he will go away satisfied.

Service Salesroom a Feature

In this layout we have provided a service salesroom. The decorations and furnishings need not be as expensive as in the car salesroom, but it should be just as clean and comfortable. The service sales manager is provided with a small railed-in office and next to it is a sitting room. The cashier's window opens into this. The owner drives his car in here, and is welcomed by a service salesman who immediately proceeds to sell whatever work is necessary on the car. After the order is signed, the car is driven into the shop by an employee. When the work is completed the customer calls at the service salesroom, pays his bill at the cashier's window, and his car is delivered to him here. In this way he never enters the shop which it is impossible to keep scrupulously clean.

The shop is directly behind the service salesroom. Only such cars as are actually being worked on should remain here. Those that are waiting their turn in the



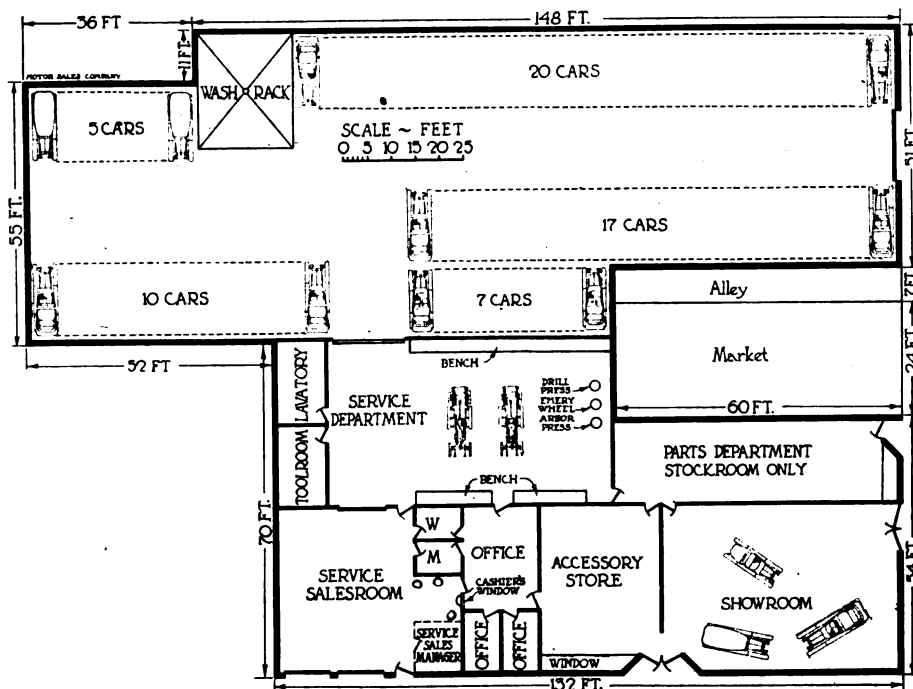
Selling service is emphasized here, a special salesroom being provided for the purpose

shop, or on which work has been completed, should be stored in the garage. A toolroom and a lavatory for the use of the shop and garage employees is provided at one end of the shop. The storage capacity of the garage is between 45 and 50 cars.

The showroom occupies the corner and next to it is the accessory store. The offices are located between the latter and the service salesroom. The question of light and ventilation for those portions of the building which do not have windows is answered by the use of skylights.

No columns are necessary to support the roof over the front of the building as the dividing partitions will take care of this satisfactorily. The garage roof should be supported by trusses which may be of either wood or steel. Of course, columns could be used here, but for a span of this length the truss construction is not expensive, and it offers the important advantage of greater facility of car movement.

Another solution of this problem in design would be to use the street frontage, now occupied by the garage, for stores which would be rented.



Floor plan of one-story dealer building which has service salesroom

LEE HIGHWAY DELEGATES TO PUSH BUILDING PLANS

NEW ORLEANS, Jan. 8—The first annual convention of the Lee Highway Association will be held at Knoxville, Tenn., Jan. 18 to 20, the birthday of Gen. Robert E. Lee. Dr. S. M. Johnson, general director of the Lee Highway, will report on the progress made during the first year of the life of the association, and plans will be laid for the completion of several links of the thoroughfare, which is planned eventually to follow what is almost an air line from New York to New Orleans.

The highway route, as now surveyed, touches all the larger Atlantic Seaboard cities, and then follows the mountain chain southward. Along the route of the highway, a zone 300 miles wide, now

inadequately served by any other means of transportation, will be thrown open to motor trucks and motor tourists. In Virginia, where the activities of the Lee Highway Association have been centered ever since its organization, approximately \$700,000 has been raised, and plans for the expenditure of this sum within the State will be prepared at the Knoxville meeting. The leaders of the association declare the entire highway will be completed within two years.

BLEKRE STARTS OUTPUT OF HIGH GRADE TIRE

ST. PAUL, MINN., Jan. 7—Production has been started in the new plant here of the Blekre Tire & Rubber Co., organized with a capitalization of \$4,500,000 to manufacture high grade cord and

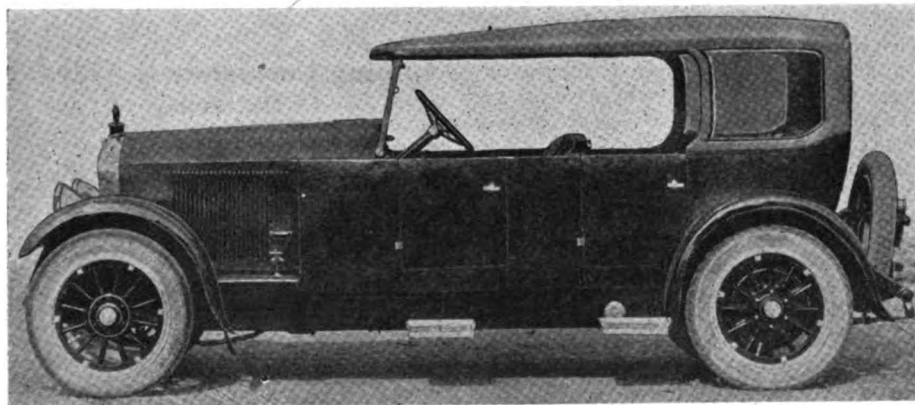
fabric tires and tubes. The plant has a capacity of 2000 tires a day and will employ 250 operatives. The company will devote itself entirely to high grade product and will not enter the medium grade field.

The formation of the company is the outcome of the growth of a small tire jobbing business started by E. O. Blekre three years ago in Sioux City, Iowa. Through the expansion of this business the Blekre Tire & Rubber Co. was formed to manufacture and market its own product, and St. Paul was selected as the manufacturing site.

Officers of the company are: E. O. Blekre, president; S. E. Blekre, vice-president and treasurer; G. W. Wells, secretary; B. A. Rheinstrom, vice-president and general sales manager; G. O. Ludcke, advertising manager, and W. E. Greer, superintendent.

NEWBURG DEALERS FAVOR A USED CAR EXCHANGE

NEWBURG, N. Y., Jan. 6—Initial steps toward the establishment of the used car exchange were taken at a meeting of the automobile dealers of Newburg in the Palatine Hotel recently. The automobile committee of the Chamber of Commerce augmented by three additional members selected from among the dealers of the city will draw up a plan of organization to be submitted to the dealers for approval and membership. A statement by John E. Kane, general manager of the Troy Used Car Exchange, in which the Troy organization and its benefits were discussed, was read. A round-table discussion of the project developed the fact that the majority of Newburg dealers favor a used car exchange and are prepared to support the present activity.



Covering motor car bodies with Fabricoid, instead of finishing them with paint and varnish, is a novelty that will, perhaps, attain a measure of popularity although there will probably be no general swing of public taste in this direction. The photograph shows a National Sixty Phaeton finished in wine-colored Fabricoid, which is being exhibited by the Poertner Motor Car Co., New York, distributor for the National

Winter Business

Send in a Winter Business Idea—Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management directed toward getting winter business and winter profits. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

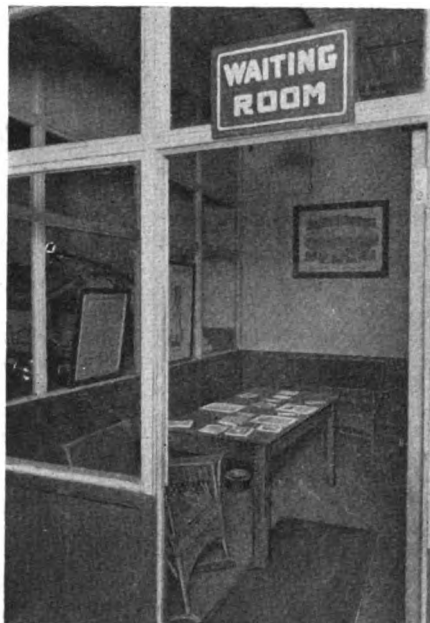
But if you'll get the idea on paper in any fashion whatsoever we shall be glad to shape it up for you.

Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Waiting Made Comfortable for Service Customers

IN their new \$300,000 service station in Atlanta, Ga., Black and Maffett, Dodge Brothers distributors, provided a waiting room for customers whose motor cars are being taken care of in the quick service department. In this room is a settee and comfortably cushioned chairs, a reading and writing table, copies of late standard magazines, Dodge Brothers literature, etc., such as might be of interest to the customer while waiting. The room is heated by steam pipes and is much warmer than the service station itself and the customer can wait here in solid comfort. Just outside the door of the waiting room is a showcase filled with the various accessories most commonly used. The car owner can hardly help seeing this case when he drives into the station or goes into the waiting room. Enough profit is derived through accessory sales over this counter to contribute a substantial amount to the overhead expense.



The Black & Maffett Service Station waiting room, Atlanta

going to houses where he believes that business could be secured. In order to encourage business special prices are made on overhauling jobs, removing carbon and grinding valves which are usually attractive. Since the repair shop has a good reputation for excellent work, this has proven a good business getter and more than a dozen major jobs were lined up for after the holiday season, when the cars will be put up for the work.

This "While You Wait" Service Pays

"DRAIN your oil and radiator while you wait" is the sign placed in front of a Columbus garage and repair shop which has attracted a good deal of attention and has resulted in a good business increase. It has been ascertained that many owners who look after their cars as far as oil and water is concerned never think of the necessity of changing the oil in the crankcase and the water in the radiator without having it called to their attention. As a result of the sign quite a few cars are driven in off the street and the owner requests that the oil be changed and the water drained out and the radiator flushed. In this connection the garageman calls attention to the necessity of keeping alcohol or other non-freezing material in the radiator and a sale is frequently made.

Getting Customers to Call for Batteries

BATTERY service stations experience considerable difficulty in getting their customers to call for their batteries when the repair work is completed. The fact that the rental charge is piling up at the rate of 25 cents a day does not seem to offer sufficient inducement to make the customers call for these batteries promptly. The H. B. Shontz Co., Inc., U. S. L. distributor in New York City, has adopted a system whereby the rental charge is increased to 50 cents a day, if the rental battery is not returned within three days after notification that the owner's battery is ready for service. This is made part of the agreement which the customer signs when receiving the rental battery.

This Sold Winter Accessories

IN the L-F Garage, in Cleveland, D. McClean, made a list of old patrons who had driven cars more than a year without encountering any apparent accident or damage to their cars. A special form letter was directed to these owners, reminding them that even though their cars might be in good condition, they had saved enough by their skill and caution in the past year to warrant the purchase of a few winter necessities which would render the coming winter's use of the car even safer and more enjoyable. A number of sales of heaters, spotlights, windshields, etc., were directly traceable to these letters.

Good Truck Advertising

THE T. C. Smith Motor Co., International distributor in Canton, Ohio, has run an interesting series of advertisements in nearby newspapers. The ads are in large type with no illustrations, but the novel feature of it is the conversation between Mr. Buyer and Mr.

Salesman. Mr. Buyer asks five questions and Mr. Salesman answers them. The questions touch such subjects as: Building trucks in the plant, the advantages of the company's raw material organization, the road engineer selling terms and the tendency of trucks to stand up and operate economically. For further information the reader is directed to the manager of the truck department.

Ringling Doorbells Sells Service

IN order to keep the shop busy during the winter months and avoid losses with a good force of mechanics, a Columbus repair shop proprietor has hit on the plan of soliciting business among the owners of higher-priced cars in his vicinity. He is well acquainted with the people living in his neighborhood and spends a few hours early in the morning

FACTORIES RESUME ON LOW SCHEDULES

Gradual Increases to Follow as Trade Revives — Wages Down 20 Per Cent

DETROIT, Jan. 6—Between 8000 and 10,000 men went back to work in automobile factories this week. While it is the plan of the manufacturers to increase forces and production steadily it is admitted freely that there will be no real resumption for a month at least. It was stated unofficially that the Dodge plant will be down indefinitely. General Manager F. J. Haynes declined to predict the date of resumption or what schedule was likely to be in effect.

Practically the entire force of 22,000 men are off, though a few hundred have been given work cleaning and overhauling the plant and parts department. Dodge continued to have a heavy output in October and November, and the factory condition is said to be similar to that of Ford. The dealers are heavily overstocked and thousands of cars are stored.

Cadillac is still taking inventory and will not get back to production before next week, according to Lynn McNaughton, general sales manager. He declined to say how many men will go back next week or what the proposed output would be. Cadillac is said to be heavily overstocked with cars, though officials deny that such situation exists.

Packard reopened yesterday with about 50 per cent of the regular force. Officials say they will increase the force as circumstances warrant. Production will be confined to enclosed jobs on the Single Six chiefly and only in keeping with demand.

Studebaker opened plant No. 5 yesterday with 400 men. They are simply getting the plant in shape for resumption of production next Monday in all the units as announced before the holidays. The company will start on a schedule of 90 cars daily in all plants, increasing as conditions warrant.

Paige on 25 a Day Basis

Paige-Detroit began taking back married men yesterday, and hope to get back into production as soon as the plant is in shape, probably by the end of the week. They will maintain at a rate of twenty-five cars daily, with about a thousand men working temporarily. The company has orders for January delivery totaling \$2,000,000 and for February \$2,500,000. This, with the daily demand expected, will permit an increase to thirty-five cars daily by Feb. 1. A survey of Paige dealers on Dec. 1, according to H. C. Dart, advertising manager, showed less new cars unsold in the country than the actual number of Paige dealers.

The Lincoln Motor Co. has about 200 men at work, though not attempting to produce any cars. All efforts are being centered chiefly in the parts department.

They expect to swing into production next week, though officials have not announced a schedule. The officials of Maxwell-Chalmers say the Chalmers plant will open Monday with about 300 men working on closed cars of both types. About seventy-five men went to work at the Columbia Motor Co. in the parts department and are getting the plant into shape for resumption of production. The date of starting has not been decided.

Other plants are still down so far as production of automobiles is concerned, though the parts departments in all plants are being operated except in the case of the Hudson and Hupp, which did not stop for inventory, continuing on the same curtailed schedule in vogue the last two months. The Essex plant is closed, but both Hudson and Essex cars are being built in the Hudson plant at the rate of about fifteen daily. Hupp is continuing a schedule of thirty-five maintained since Dec. 1.

No Complaint on Wages

Wage schedules in all plants which reopened yesterday have been cut around 20 per cent, but no complaint has been received and workmen after weeks of idleness are apparently eager to return at the reduced scale. The stopping of the Ford and Dodge plants simplified the wage problem, and plenty of labor is now available at a reasonable wage. Best of all, manufacturers say the returned workmen are full of pep and are apparently ready to give full return in service despite the wage reduction.

Many plants are still idle and the resumption of those which do Ford work is chiefly problematical. The Briggs Mfg. Co., makers of Ford tops, Liberty Starter Co., Hayes Wheel Co. at Albion probably will not resume till Ford starts production. The Fisher Body Corp., Wilson Body Co. and the Auto Wheel Corp. have been cut materially as a result of the Ford shutdown.

Buick to Resume on 250 Daily

Buick will get under way next Monday and will continue indefinitely their daily schedule of 250. Dort will not get started on their new model probably until the end of the month, and Oakland and Olds expect to start next week with a short force and their output limited to the demand in sight, though a schedule of 100 for Oakland and thirty for Olds will be the starting figure. Reo resumed production, but is continuing on a short time schedule and building about thirty cars daily. Chevrolet will get under way by the end of the week on production of 100 a day, to be increased as demand justifies.

WILSON BODY DECLARES BIG STOCK DIVIDEND

DETROIT, Jan. 6—The C. R. Wilson Body Co. has declared a stock dividend of 300 per cent, payable to all stockholders of record. Notwithstanding financial depression the company has had the biggest year in its history. There now is a steady increase in the number of orders for bodies.

AKRON ORDERS REACH \$50,000,000 TOTAL

Operations Are Resumed on Fair Normal Schedules— Wage Cuts in Effect

AKRON, Jan. 10—The Akron rubber companies resumed operations Jan. 3, after being closed for the Christmas holiday week with every indication pointing to considerably increased production. There is a gradual absorption of Akron's estimated army of 20,000 unemployed men and a steady return to conditions approaching normal in the tire industry. Goodyear wages were cut 12½ per cent and salaries 15 to 20 per cent, effective to-day. This corresponds with cuts in other plants announced previously.

It is stated authoritatively by Akron manufacturers that Akron rubber and tire concerns start the new year with fully \$50,000,000 worth of new business on their books so far for the month of January. This estimate is conservatively made and is likely to be exceeded largely when all January orders are compiled. Manufacturing business averaged \$53,410,000 a month last year for a total value of \$640,923,000.

This, according to business experts, is the most encouraging note in the tire industry that has been sounded since the period of retrenchment began last summer. It is not taken to mean, however, that the \$50,000,000 worth of business will result in increased production at once, but is taken to augur well for an early resumption of factory operations on nearly a 100 per cent basis. Practically all companies have surplus finished product on hand sufficient to accommodate January orders, but with orders continuing to increase as they have since Dec. 15, it is stated that this surplus rapidly will be worked down and will demand greater production at least by Feb. 15 in order to keep production apace with demand. The Goodyear company on Dec. 15 had over \$10,000,000 worth of business booked, with over \$5,000,000 more in new January orders received since that time. Other companies show commensurate amounts of January business on their books and deliveries on order was started this week.

The B. F. Goodrich Co. on Monday increased factory operating time and put on many former employees.

Firestone Position Strong

The Firestone company is understood to be more sound financially than any other concern in Akron and to be prepared to increase production just as soon as the present surplus is worked down by deliveries on early 1921 orders.

The Goodyear company's business is coming in to such extent as to indicate an early necessity for increased production, but under the company's present temporary financing program there is no possibility of the present payroll being increased.

ARMY TRUCK DUMPING IS STARTED ON COAST

Los Angeles Gets Shipment from Europe—Dealers Fear Glutted Market

LOS ANGELES, Jan. 7—Pacific Coast motor truck dealers are alarmed over the prospective effects on their business of the importation of war trucks from Europe and their sale in this country and the suggestion of Congressman Anthony that the War Department be compelled to release between 30,000 and 40,000 trucks. Seventy-five trucks imported from Europe were unloaded here a few days ago. Similar cargoes are destined for San Francisco, Portland and Seattle.

These trucks have been brought here by the Slough Trading Co. of England and their local representative is quoted as saying the trucks originally were sold abroad by agents of the American Government. The shipment received here is made up of Packards and Rikers, all practically new. The representative of the Slough company claims they have 4000 similar trucks to be marketed in this country, including Whites, Pierces, and Rikers. He is seeking to dispose of the local shipment intact, but if he is unable to do so, he probably will auction them. He also has on hand large quantities of tires and tubes from the same sources.

In view of the present market conditions, the arrival of these trucks from Europe and Anthony's amendment proposal, the truck dealers are appealing to national associations and Congressional representatives for protection. They say the country might absorb 4000 trucks from Europe, but never 40,000.

N. A. C. C. Committee to Act

NEW YORK, Jan. 8—The motor truck committee of the National Automobile Chamber of Commerce, at its meeting here next week, will discuss the dumping in this country of American army trucks sent from England by a British corporation and the proposed unloading of thousands of army trucks held in this country. An effort will be made to devise some means of protecting the industry at a time when the market is virtually flat, but officers of the N. A. C. C. are not sanguine of success. The suggestion has been made that the manufacturers buy up the trucks but this is not considered practical.

Bigelow-Wiley Changes Name

PHILADELPHIA, Jan. 8—The Bigelow-Wiley Motor Car Co., which deals in Paige cars, has changed its name to the Guy A. Wiley Motor Co. It will move into the new Wiley Building, across the street from its present quarters, about Jan. 22, when the automobile show closes. The business was started about three years ago by Mr. Bigelow, since deceased; Wiley then taking over the active management.

FRITZ SEES REVIVAL DUE ABOUT MARCH

CHICAGO, Jan. 8—George Fritz, formerly field secretary of the Automotive Equipment Association and now general manager of the Research Club of this city, on his return from a trip through the country sees a general revival of business in the automotive field following the holding of the automobile shows. This revival, he feels from his survey of conditions, is due some time about March with steady improvement from then on.

He predicts a shortage in the spring somewhat similar to that which previously faced the jobber through the depletion of present stocks in the jobber's hands and the heavy call which will be made on the manufacturer when the revival of business comes.

NEW ORLEANS INVITED TO EXHIBIT IN MEXICO

NEW ORLEANS, Jan. 8—New Orleans automobile dealers and exporters have received invitations from the American Chamber of Commerce of Mexico City to take part in a national automobile show, to be held in the new \$25,000,000 opera house there in March, 1921. Free passage of exhibits through the customs houses and reduced rates of railroad and water transportation have been arranged.

The list of manufacturers and exporters who have agreed to take space in this exhibition is placed at forty-seven to date, in the statement of the American Chamber of Commerce. There are also reported to be 139 dealers in automobiles in all of Mexico, "the majority of whom," the invitation says, "will take part, either with exhibits of their own, or as part of the exhibits of the manufacturers of the cars they sell."

Hartford to Unite on Show

HARTFORD, CONN., Jan. 6—Dates for the annual Hartford automobile show having been definitely settled the Hartford Automobile Dealers Association is going ahead with plans for the exhibition which will be held in the State Armory from Feb. 12 to 19. All indications according to the association point to a larger show than in former years. A year ago the Automobile Trades Association of Hartford was formed primarily to stage a show for those dealers who could not exhibit in the old association show. Most of the members of the new association, including the founders, have made application to become members of the original association.

A Correction

Hanson & Tyler Co., Fort Dodge, Iowa, was not agent for either Chandler or Cleveland at the time of its assignment. These lines were placed in other hands in April, 1919.

FORTY-TWO STATES TO REVISE CAR FEES

Tendency Toward Increased Licenses and Restricted Weights Is Shown

NEW YORK, Jan. 6—An avalanche of motor vehicle legislation threatens from the forty-two legislatures that are beginning their sessions, according to a review by the Motor Vehicle Conference Committee, at a meeting held this week.

The committee received reports from its various state sub-committees. Each of these reports from the forty-two States in which legislatures are meeting was a forecast of expected attempts at legislation. None of the law-making bodies were under way at the time these reports were drafted and these reports were based on advance work.

The tendency, as seen by these reports, is for legislation with the following points as objective:

- 1—Increased registration fees.
- 2—Restriction of maximum weights.
- 3—State tax on gasoline.

The encouraging feature of these reports was that in several States local bills have been drafted, based on the "Proposed Uniform Vehicle Law" published by this committee.

In organizing this legislative work by stages, the committee has heard some criticism from local committees which apparently fear that this committee is planning to supplant the local work. Where the local State committees are working well, this committee will aid the local committee.

Alfred C. Reeves made a partial report of the tax situation on behalf of the National Automobile Chamber of Commerce. He said that word from Washington indicated that there was slight need for hearings before a Congressional Committee before the Special Session of Congress.

Adapt Trucks for Trailers

NEW YORK, Jan. 6—The Trailer Manufacturers Association of America announces that new truck models for 1921 to be put out by several manufacturers will embody changes which will adapt the trucks for drawing trailers. These include additional speed changes, heavier rear end construction, coupling devices and increased braking surfaces. The Association strongly urges truck manufacturers to adopt standardized trailer hitches as regular equipment so that any make of trailer can be used with any make of truck.

2000 Sheridans Ordered

NEW YORK, Jan. 10—D. A. Burke, president of the Sheridan Motor Car Co., a subsidiary of General Motors, announces that dealer connections have been established in the principal cities from coast to coast and that dealers already have filed orders for more than 2000 cars. The 8-cylinder job probably will get on the market this month.

SOUTH ENCOURAGED BY EXPORT OUTLOOK

Functioning of International Corporation Is Awaited to Restore Normal Prices

ATLANTA, Jan. 6—The New Year brings bright prospects for a twelve-month period of prosperity and better business over the entire South, with a return to normality and a general stabilizing of business conditions, in the opinion of leading bankers and financiers of Atlanta, interviewed on that subject.

Interesting statements made by the bankers regarding the immediate future and the outlook for the year were to the effect that as soon as the Federal International Banking Corp. begins to function, enabling Southern farmers and cotton men to sell their product in the European markets, the whole business of the South will begin to experience an era of unusual prosperity.

"Exercise of confidence among farmers, workers and business men," said one prominent banker, "will go further toward hastening an era of prosperity for the South than any number of statements or expressions of optimism."

"Prosperity will come to the South during 1921," another banker stated, "but the quicker the people as a whole realize the necessity of making some sacrifice to bring about a readjustment, the sooner they will get over the unsettled conditions that must necessarily precede stability of conditions."

WESTCOTT PREPARES FOR NORMAL RESUMPTION

SPRINGFIELD, Jan. 10—"Our business was one of the first to be affected by the depression and we expect it to be one of the first to revive," said General Manager H. G. Root of the Westcott Motor Car Co., in speaking of the business outlook. "Evidences of recovery are already in sight. We look forward to a satisfactory spring and summer business."

Certain departments of the plant which have been operating on a restricted schedule, will increase operations to-day so that they will be on full time with a moderate force preliminary to starting all departments of the factory on full operation Feb. 1. These departments referred to include the sheet metal, machine and paint departments.

Company Dismisses Officers

CINCINNATI, Jan. 6—Robert L. Bowman, president of the Bowman Automobile Sales Co., Covington, Ky., was dismissed as president of that company by the directors at a special meeting following Bowman's arrest on a charge of issuing worthless checks and with having passed a forged note. The directors passed a resolution disavowing responsibility for any acts committed by Bowman and his brother, Rice Bowman,

an employee of the company, who also was arrested on a charge of converting money to his own use, and changed the name of the company to the Elcar Sales Co.

Louis L. Manson, police judge of Covington, vice-president and treasurer of the company, was named president, and L. V. Crockett was named general manager.

TRAFFIC CAMPAIGN HELPS RENEW INTEREST IN CARS

NEW ORLEANS, Jan. 10—The Motor League of Louisiana commenced work Jan. 1 on a series of motion pictures designed to correct common errors in automobile driving, to increase proper observance of traffic laws, and to increase interest in the automobile, so as to assist as far as possible the automobile dealers in their advertising and sales campaigns.

These motion pictures, which are given in interesting form of news and educational weeklies, show the work of the police in directing traffic, with explanatory sub-titles, showing exactly why the work of the traffic men and the motorcycle squad is done, and then the proper and improper methods of driving, so as to assure conformation to the traffic laws of various cities and towns in Louisiana.

Dealers are co-operating by furnishing cars and drivers.

A later series of pictures will show the motorist how to care for his own car, and how to make minor repairs, which will enable him to move along until he can reach a repair or service station.

Reo Resumes on Half Time

LANSING, MICH., Jan. 6—The Reo Motor Car Co. has resumed operations after inventory. Its entire force of 5400 men is working on half time.

STOCKS RUNNING LOW, BUYING MUST RESUME

Autocar Official Finds Stage Set for Return to Business at Once

NEW YORK, Jan. 10—David Ludlum of the Autocar Co., here to visit the Highway Transportation Show, imparted much optimism on the outlook for increased business. Ludlum came to New York from a two weeks' vacation in upper New York State, where he visited many country merchants. He had with him the December sales reports of his company. His optimism was founded on these two incidents. He said:

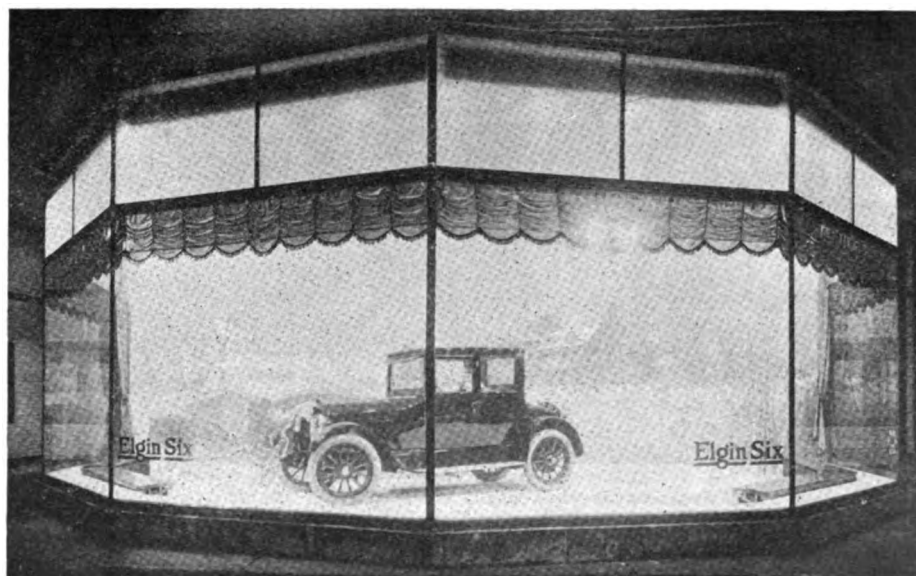
"I firmly believe that we are beginning a big year. During my trip I have visited many country merchants and I found them so down in stocks that they could not supply the wants of their trade and they all are realizing that they must order goods and order them quick. They believe that present wholesale prices are as low as can be expected. I predict good merchant buying at once and that it will be widespread.

"Reports from our factory show high sales in December, running a very large percentage over November and December a year ago. The year end sales were very encouraging."

To Enlarge Mechanics' Course

NEW ORLEANS, Jan. 6—Loyola University is soon to start a modern three story concrete building, fully equipped for all forms of automobile repair and reconstruction. More than 200 students are now at work in the automobile mechanics' school, as compared with eight when the department was founded eighteen months ago.

A Fine Winter Window



The winter comfort of an enclosed car is strikingly advanced in this window display of the Elgin Motor Car Sales Co., Chicago. It is extremely effective at night through the use of colored lights.

SALT LAKE BUSINESS SHOWS GOOD AVERAGE

**Prospects Brighten Daily as
Open Season Continues—
Plan Greatest Show**

SALT LAKE CITY, Jan. 8—Automobile selling prospects for the Inter-Mountain region for the next three months hold an even chance for a gain providing fair, good weather prevails. With the trade centering about Salt Lake business is averaging good with a depression increasing with the variance of distance away from the Utah metropolis.

Climatic conditions influence the automobile business fluctuations in this region to such an extent that with the passing of cold and stormy weather the inevitable result is a decided change for the better in market conditions. Thus far this winter exceptional good weather has prevailed throughout the Inter-Mountain region. Motoring weather has assisted salesmen and sales reports are little below the average.

With the approach of the Salt Lake 1921 Automobile Show, prospect lists are taking better form each day and with the possibility of an early spring, increasing interest in the motor car is daily being evidenced throughout this territory.

Plans for the greatest automobile show that has ever been held in Salt Lake are being laid by the Inter-Mountain Automotive Trades Association and the Utah State Automobile Association. This is the first time in the history of the show that the automotive trades association has loaned its active support to the effort. The show dates are Feb. 21 to 26, inclusive.

To Sell Battery Thermostat

CLEVELAND, Jan. 6—The merchandising of the Rescue battery temperature controller, a device which warns the driver whenever the battery temperature exceeds safe limits, has been taken over by the Automobile Accessory Engineering Co. of Cleveland. It will be sold directly by them through their branch houses in New York, Chicago, Denver, Los Angeles, and through sub-agents. This device is manufactured by the Resco Products Co., Inc., Jamestown, N. Y.

Going West—and Direct to Dealers



There are 100 tractors on this train, starting from the Hart-Parr factory at Charles City, Iowa, to dealers in Colorado and southwestern Nebraska. Every one of these tractors was sold for cash, through the Hart-Parr sales financing plan under which the manufacturer deposits funds in dealers' local banks to finance the dealer's and the farmer's purchase. The shipment was ordered through the Anderson Hart-Parr Co. of Denver, which sold the financing idea in a personally conducted campaign carried to the doors of dealers and bankers in its territory.

AMERICAN DUNLOP TO MEET OWN NEEDS

**Directors of British Company
Decide Subsidiary Must Now
Finance Self**

LONDON, Dec. 24 (*Special Correspondence*)—Directors of the Dunlop Rubber Co. have reached the conclusion that the time has come for the American company to finance itself and negotiations to this end now are under way. There has been some perturbation among the stockholders of the British company over the position of the corporation, and to allay apprehension the directors issued the following statement:

"Within the past few weeks the company has been called upon to assume the responsibility of providing the additional finance required to place the American Dunlop Co. in a position to complete the construction and installation of its factory and to provide sufficient working capital to enable that company to carry out its first year's trading program.

"While the Dunlop Rubber Co. is under no liability to provide this additional finance, the Board recognizes that it is in the interests of the company that the American enterprise should be carried on and in accordance with the statements made at the last meeting of shareholders held on Sept. 10 last, the greater part of the sum of 1,000,000 pounds (\$5,000,000) has been remitted during the last few weeks.

"The directors, however, feel very strongly that the American company should now take steps on its own initiative to provide the further funds required to bring the undertaking to completion, and important negotiations, in which this company is assisting, are now pending for this purpose, but it is not expected they will reach finality for several days. The moment a definite statement on the subject can be issued a full circular will be addressed to the shareholders of the Dunlop Rubber Co. dealing with this matter and with the position of the company generally."

Superior Dealers Organize

SUPERIOR, WIS., Jan. 6—The automotive distributor and dealer trade of Superior, Wis., has formed its first permanent organization under the style of Superior Automotive Dealers' Association. It is based on the form of the Milwaukee association. The new organization will become affiliated with the Wisconsin association. The leading spirits in the Superior society are E. G. Kuehlthau, H. C. Lavery and G. A. Olson. For the last six years Superior has held an annual winter show, but this has been conducted by the Civic and Commerce association with the co-operation of a voluntary committee of dealers. The 1921 show will be directly under the auspices of the new association.

SOUTH CAROLINA ASKS BUSINESS MEASURES

*Would Bring State Laws to
Present Day Requirements
—Would Protect Buyers*

COLUMBIA, S. C., Jan. 6—The South Carolina Automotive Trades Association will make strenuous efforts, at the meeting of the general assembly in January, to have passed several measures having to do with the automotive industry in this State. Members of the association have been requested to take up these measures with their various senators and representatives so as to get a definite expression from them as to where they stand.

One of the measures provides that a bona fide purchase money mortgage shall take precedence over an attachment. At the present time, the attachment has precedence.

Another measure will require concerns advertising second quality goods to so describe them in their advertisements. This is to prevent damage to the business of legitimate dealers.

Another proposed measure requires the maker of a bond in a claim and delivery suit given to prevent foreclosure of mortgage to be responsible for depreciation of property held under bond, as well as being responsible for delivery of the property itself.

The association will also work for the passage of a false statement act so as to properly handle a person, firm or corporation which issues a false statement as a basis for credit.

Efforts will also be made to secure more stringent laws in reference to thefts of motor vehicles and punishment therefor with probably a section covering the registration of the title of all vehicles sold.

The automobile industry is a new one and the South Carolina association realizes that many of the laws which are applied to it are very old and, therefore, inappropriate. The association is asking no favors but wants just and fair treatment at the hands of the lawmakers.

WOULD GRADUATE TAX ACCORDING TO SEASON

CEDAR RAPIDS, IOWA, Jan. 6—Legislation which will regulate the apportioning of the tax money collected from automobile licenses in the State of Iowa, so that the cities may share in the tax, will be introduced into the coming State legislature's session, which convenes Jan. 10, by S. L. Graham, representative-elect from Wapello, he declared recently.

Graham said he also favors legislation regulating the present vehicle law so that the automobile tax may be graduated during the year to the end that the purchaser of a car in November must not be required to pay the same license as does a buyer in January or February.

CINCINNATI "CHIPS IN" TO BUY BABIES TRUCK

CINCINNATI, Jan. 6—Even when business is slack, as it is now, the automobile dealers of Cincinnati are willing to do their share for a worthy cause. Friends of crippled children started out just before Christmas to raise money to purchase a truck in which the children could be transported to the special classes conducted for them at General Hospital. The automobile dealers chipped in liberally, donating almost half of the expense of the truck. The largest subscriber was Harry Leyman, Buick dealer, with a subscription of \$300. And Leyman doesn't sell trucks.

WARN TAXES MAY KILL TRUCK TRANSPORTATION

BOSTON, Jan. 8—Motoring interests in this State, including car owners, truck owners, operators and the dealers in cars and commercial vehicles are greatly stirred up over the proposal of the Department of Public Works to seek legislation that will bring about practically a 100 per cent increase in the registration fees.

The truck men are especially disturbed, for they feel that such an increase in the fees is unwarranted and a direct blow to a system of transportation which is of greatest importance to the shippers of the State. They point out that too much Government interference nearly ruined the railroads, and that burdens put upon the trolley lines made it impossible for them to survive the competition of the motor car. And they say that the same sort of burdens will make it impossible for motor transportation to fulfill its important function of transportation to the advantage of the industries of the State.

To Pull Illinois Out

CHICAGO, Jan. 8—The new Legislature will take up seriously the question of good roads with the object of "pulling Illinois out of the mud," as expressed by Governor-elect Len Small following conferences held at the Great Northern Hotel here. "The immediate problem that the new administration must work out is the formulation of a construction system for road building that will put Illinois on the map," Small said. "We should take every advantage of the preliminary work that has been done under the \$60,000,000 bond issue system."

Confer on Maine Laws

AUGUSTA, ME., Jan. 8—Automobile owners, dealers, State officials, lawmakers-elect and citizens in general had an "experience meeting" at the State House to talk over automobile problems preparatory to the assembling of the 80th Maine Legislature.

GREATER CO-OPERATION TO BE UTICA CREED

*Association Is Changed from
Organization to Hold Shows
—New Officers Chosen*

UTICA, Jan. 6—Greater co-operation among the automobile business men of the community was the keynote of the annual meeting of the Utica Motor Dealers Association held at the Hotel Utica yesterday, when a new set of officers was elected for the year by the board of directors. Up to the present the Utica automobile dealers have been organized for the purpose of holding an annual automobile show only.

Hereafter the officers and directors of the association propose to so handle the activities that every dealer will benefit every day in the year. Monthly meetings of the dealers, as well as the board of directors, will be held, when everything pertaining to the good and welfare of the automobile business will be discussed. Prominent men in automobile and truck business will be invited to address the meetings.

The officers of the Utica Motor Dealers Association for 1921 are: Walter H. Schiller of the Schiller Electric Co., president; N. Nelson of the Utica Automotive Corp., vice-president; H. W. Skinner of the H. W. Skinner Motor Car Co., Inc., secretary; W. W. Garabrandt of the Franklin Motor Co., treasurer.

The new directors are: W. H. Schiller of the Schiller Electric Co., H. W. Skinner of the H. W. Skinner Co., Inc.; W. W. Garabrandt of the Franklin Motor Car Co., A. A. Lederman of the Pierce Arrow Motor Car Co., Glynn Hughes of the Hughes Motor Car Co., N. C. Nelson of the Utica Automotive Corp., and R. Robischon of the R. R. Motor Sales Co.

OHIO ASKS GOETHALS FOR HIGHWAY ADVICE

COLUMBUS, Jan. 7—Governor-elect Harry L. Davis announces that he has wired Major General George W. Goethals, builder of the Panama Canal and former Quartermaster-General of the Army, asking for a conference in Columbus immediately after his inauguration early in January for the purpose of getting advice on the reorganization of the Ohio Highway Department. The reorganization of the Ohio Highway Department has been given a great deal of attention by the incoming Governor and which he promised to accomplish during his campaign speeches.

"I am looking for the biggest man I can find to aid me in the reorganization of the Ohio Highway Department, which spends millions of dollars each year on roads," said the Governor-elect. General Goethals will be asked to spend as much time as possible in Ohio while the reorganization is taking place.

ATLANTA DIRECTORS APPROVE SHOW PLAN

**Biggest Merchandising Effort
in South Awaits Final Action
—Appropriate \$20,000**

ATLANTA, Jan. 10—Plans for one of the largest automobile shows ever held outside of New York or Chicago have been approved by the board of directors of the Atlanta Automobile Association, and it is now virtually certain that the show will be held from March 5 to 12. At a meeting of the entire membership of the association in the near future definite decision regarding the show will be made.

Southern dealers have experienced several months of depression, and in most cases have lost money in the operation of their businesses for some time, but the fact has not discouraged them, for they are planning to spend more than \$20,000 on the initial arrangements for the show in order to make it their biggest and best.

The main floor of the Auditorium provides about 22,000 feet of floor space, while Taft Hall, which is a part of the building, provides about 9000 feet. The main building will be used to display automobiles and accessories, while trucks will be on exhibition in Taft Hall.

The program that is being arranged for the event will bring to Atlanta during the show some world-famed talent, including the Arthur Pryor Band for the entire week, and several celebrated members of the Metropolitan Grand Opera Company.

For lighting and decorating alone more than \$6,500 will be spent, and it is also planned to spend more than \$5,000 to advertise the show throughout the South.

The show is to be known as the Greater Southern Automobile Show, and dealers and distributors in all of the seven Southeastern States will be asked to co-operate in making the event a big success.

SEVENTY-EIGHT MAKES FOR PHILADELPHIA SHOW

PHILADELPHIA, Jan. 5—Present figures indicate that there will be at least seventy-eight different makes of cars displayed at the Philadelphia Automobile Show, which will run for a week, beginning Jan. 15.

It is regarded as significant that the twentieth automobile show in the Quaker City will display nearly four times as many makes of cars as were exhibited at the first Philadelphia show held in 1901. But two of those makes of cars survive—the Locomobile and the Winton.

All of the Philadelphia exhibitors will virtually duplicate the New York exhibit, many showing special body designs and chassis. They will be displayed amid the most notable setting yet seen here. There will be 43 firms represented this year in the automotive equipment field.

USED CARS FOR COTTON TRIED IN MEMPHIS

MEMPHIS, TENN., Jan. 10—The Memphis Motor Car Co., Hudson and Essex distributors, are announcing a feature in "used cars" for part cash and part cotton, or all cotton, the cotton, of course, to be shipped to Memphis and classed by cotton factories. They thus show confidence in Dixie's staple and their resources are such that they can hold cotton until a demand makes it marketable for cash.

BALTIMORE DROPS TRUCKS AND ADDS ACCESSORIES

BALTIMORE, Jan. 8—There will be several new features to the Baltimore automobile show which opens Jan. 22 at the Fifth Regiment Armory and which promises to be a hummer. For the first time, accessory dealers will have exhibits at the show. They will have spaces in the east and west balconies.

There will be nearly fifty dealers showing about sixty-five cars and there was demand from many more for space. There will be no trucks shown this year.

The show is under the auspices of the Baltimore Automobile Dealers Association, Inc. John C. O'Brien, general manager, and the committee in charge is composed of A. H. Bishop, E. T. Backus, W. F. Kneip, E. R. Myers, A. Stanley Zell, H. S. Block, Frank M. Olmstead, and Thomas G. Young.

RESERVATIONS MADE FOR N. A. D. A. DELEGATES

ST. LOUIS, Jan. 6—Hotel arrangements are being made in Chicago for hundreds of dealers who will attend the fourth annual convention of the National Automobile Dealers Association. The sessions Jan. 31 and Feb. 1 will be held in the Hotel La Salle, and the third annual trade frolic will be held on the evening of Jan. 31 in the same hotel.

Dealers who have not yet made reservations are requested to notify headquarters here at once. Secretaries of State and local associations affiliated with the N. A. D. A. will furnish tickets for the trade frolic. A complete program of the business meeting will be issued soon.

Franklin Stock Cleared

SYRACUSE, Jan. 10—A letter sent to stockholders by the H. H. Franklin Mfg. Co. states that 1041 cars were sold and shipped last month as compared with 826 in December, 1919. Finished cars on hand at the factory on Sept. 1 numbered 544, but none was on hand Jan. 1. The production in December was at the rate of 33 cars a day while the average for the ten months ending Aug. 1 was 39. Reports to the factory show that dealers are not stocking cars but are selling them as fast as they are received.

COAST TO EMPHASIZE PLACE OF INDUSTRY

**Fifth Annual Pacific Show to
Be More Than Ordinary
Exhibit**

SAN FRANCISCO, Jan. 8—That the Fifth Annual Pacific Automobile Show will formally place the automotive industry of the West in its earned position as one of the first of stable American industries, is the declaration of automobile leaders planning for the exposition here. The show, which is to be held Feb. 19 to 26 in the Exposition Auditorium, is to be more than a mere showing of the last word in automotive achievement.

The industry has emerged from the recent threatened financial crisis more stable and solid than ever before and with the same dignified and conservative industrial leadership which characterized the final administration of the Nation's railways, according to Pacific Coast leaders. As a result, this region is looking to 1921 to be the greatest season in the twenty-five years' history of the motor vehicle.

While local industrial leaders declare that the threatened industrial crisis was not due to the automobile, or that its value of utility was ever questioned, they say that a change has taken place in the financial structure of the industry. This change has stabilized the industry, they declare.

The decorative motif is to be a tribute to the California "out-of-doors," and, it is claimed, will eclipse last year's exposition beautiful. Wahlgreen declares an elaborate California setting is a fitting one, as it was California's strategic location as a distributing center, her highways and agricultural and scenic resources which recently furnished underwritten safety for the industry here at a time of national readjustment.

The show will be held immediately after the New York and Chicago expositions, with sufficient time allowed to permit the arrival here of the factory offerings for the 1921 season, including the "show" cars and contrivances prepared for the two national Eastern and Middle Western shows.

The interior of the mammoth Exposition Auditorium will be made over for the show and will provide more than 100,000 feet of exhibiting space. The main floor will be devoted to passenger car models, the lower floor to trucks, tractors and equipment, and the second floor to accessories.

The show will be held under the auspices of the motor car dealers of San Francisco.

Conde to Hold Show

OTTAWA, ILL., Jan. 5—Conde Motor Supply Co. has rented the Armory here for Feb. 17 to 19, inclusive, upon which dates it will stage its second annual automobile, truck, tractor and accessory show.

HARVESTER COMPLETES FIRST SPEED TRUCK

**Plans 100 a Day Production—
Selling Agencies to Be
Increased**

SPRINGFIELD, OHIO, Jan. 10—"The outlook is very good for the Springfield plant," said C. H. Smart, superintendent of the Springfield works of the International Harvester Co. in discussing business prospects for 1921. "We are going ahead with the manufacture of the speed trucks on a definite schedule for the entire year. We feel that these trucks will be taken up as fast as we can turn them out. We are going through with the program. The outlook is better for the plant than for years."

The Springfield works turned out its first complete "Model S" International truck made in Springfield a few days ago. It is expected that the plant will be turning out twenty trucks a day within the next few weeks. The goal will be 100 complete trucks daily. About 1000 men are now at work in the big works. By summer it is expected that this number will be increased to 1500 or 2000.

The Model S truck is of 1500 lb. capacity and is equipped with 34 by 5 cord tires, pump, electric lights and self starter. It is designed for rapid transportation of light loads. The officers of the company believe that the farmers will find the light truck of great service. The truck will be equipped with any kind of body that the purchaser may desire.

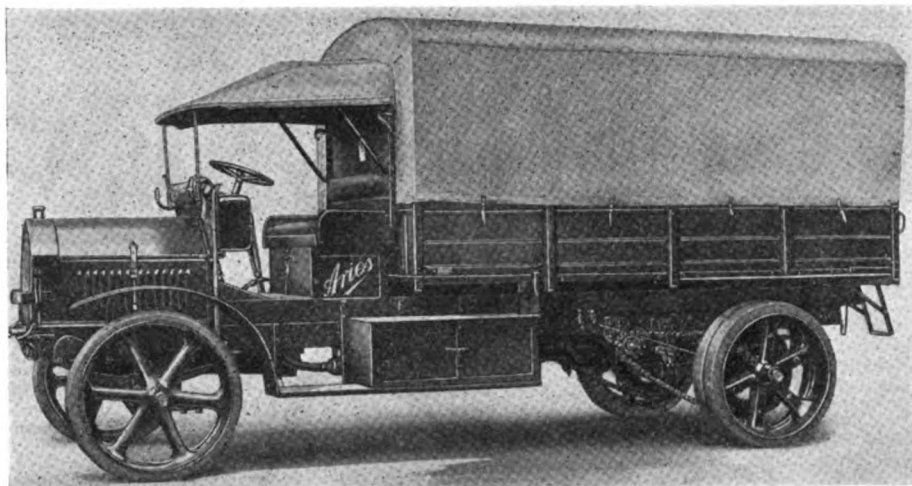
The Harvester company will establish agencies throughout the United States and foreign lands. The company now has ninety-two general selling agencies and will establish more. A service station will be opened at the Springfield plant for all of the high speed truck owners in this district. Similar service stations will be opened in many of the large cities. The Model S truck will be exhibited at the Columbus show in January. One of the new trucks is on exhibition in the lobby of Hotel Shawnee here.

Fay-Allen Cuts Service Price

BOSTON, Jan. 6—In line with the endeavor to reduce prices every way possible, the C. E. Fay-Allen Co. has announced a reduction in the charge of service to their customers.

Miller-Lee Gets Overland

ROCHESTER, Jan. 6—It's Miller-Lee Motors, Inc., who are distributors of the Overland and Willys-Knight automobiles in Rochester now. Following a transaction put through this week, that firm took over the Willys-Overland Co. factory branch here. The new company is composed entirely of business men new to Rochester, and they have no connection whatsoever with the Overland-Rochester Co., which went out of exist-



Aries 5-Ton Truck to Sell for \$5,000

THE Aries truck, made by Societe Aries, Paris, France, is now being represented in the United States by C. O. Assmus & Co., 1457 Broadway, New York. Plans are under way for representation throughout the country and arrangements for service and parts are being made. The Aries truck is made in but one model, this being a 5-ton job. The engine is a four cylinder Ballot, the cylinders being cast in block and having a bore of 3½ in. and a stroke of 6 in. The valves are enclosed. Ignition is by a Lavalette high tension magneto and the carburetor is a Zenith. The lubrication of the engine is taken care of by a pump which automatically circulates the oil

through all working parts. A safety valve keeps the pressure constant and there is a sight gage on the dash. The radiator is of cellular type and cooling is assisted by a belt driven fan.

The clutch is metal disk type requiring no lubrication, and the operating mechanism is suspended on swivels, so as to be independent of all movement of the chassis. The gearset is of the selective sliding type providing four speeds forward and reverse. The gears are of the constant mesh type.

The standard chassis is fitted with 40 x 5 in. single in front and 40 x 5 in. dual tires in rear. The standard army body without hooks and canvas is \$5,000.

ence last spring. Roy G. Miller, president of the firm, handled the Overland cars in Hilton for seven years, while B. Court Lee, secretary and treasurer, was assistant cashier at the State Bank of Hilton. The other two members of the firm are G. Champney Lee, and Harold Miller.

BUY AN AUTOMOBILE AND HELP YOUR CITY

SYRACUSE, Jan. 11—The Automobile Dealers Association is capitalizing the importance of the automotive industry in this city in its advertising of the annual show to be held in March. In its advance publicity, the association has informed the Syracuse public that the weekly payroll of the Syracuse automotive plants is almost \$400,000, and the annual sales from these plants in the neighborhood of \$65,000,000. The publicity then goes on to show how support of the industry through purchase of automobiles in Syracuse is in effect support of the city itself.

Manwaring Gives Dinner

PHILADELPHIA, Jan. 6—The firm of Manwaring & Goodman, distributor of Day-Elder trucks, gave a dinner and dance to its employees and their wives in the gold room of the Adelphia Hotel. W. A. Manwaring, president of the company, presided at the dinner.

FARMERS SIGN SPECIALS FOR TRACTOR EXHIBIT

COLUMBUS, Jan. 7—Thousands of requests for complimentary admission tickets to the National Tractor Show, which will be held in Columbus Feb. 7 to 12 inclusive, have been received by E. E. Whaley, manager of the show. So far over 6000 admission tickets have been sent out and others are mailed out at the rate of 500 daily. Letters are arriving from land owners, tenants and others, inquiring about railroad rates and hotel accommodations. Many of the letters make inquiries concerning Ohio weather conditions in order to prepare for the journey. One woman writes from Montana saying that she operates four tractors and will attend the show to see what new makes have been developed.

Special trains are being arranged for some sections. Farmers near Atlanta, Ga., have secured two special cars to be attached to a regular through train. An entire special train has been secured in Philadelphia for farmers of eastern Pennsylvania and adjacent territory.

Cooper Opens Two Branches

CINCINNATI, Jan. 6—The I. J. Cooper Rubber Co. has opened new stores at Louisville and at Atlanta. A few weeks ago a new store was opened at Birmingham, Ala. These additions bring the total stores to twelve.

COMING EVENTS

SHOWS

Ardmore, Okla.	January	Annual Automobile Show, Ardmore Automobile Dealers' Ass'n, Convention Hall, R. L. Beede, Sec'y.	Erie, Pa.	Jan. 31-Feb. 5..	Annual Automobile Show, Automotive Association of Erie, General Electric Bldg. John Roth.
Pontiac, Mich.	January	Annual Automobile Show, Pontiac Automobile Dealers' Ass'n, Millward Garage.	Cumberland, Md.	Jan. 31-Feb. 5..	Annual Automobile Show, Cumberland Automobile Dealers' Ass'n, State Armory.
Philadelphia	Jan. 15-22.....	Annual Automobile Show, Philadelphia Automobile Trade Ass'n, Commercial Museum.	Oakland, Cal.	Jan. 31-Feb. 6..	Annual Automobile Show, Alameda County Automotive Trades Ass'n, Oakland Civic Auditorium.
San Antonio, Texas.	Jan. 15-23.....	Automobile Truck and Tractor Show, San Antonio Automotive Trades Ass'n.	Scranton, Pa.	Jan. 31-Feb. 10..	Passenger Car Show, Scranton Motor Trades Ass'n, Armory, H. B. Andrews, Mgr.
Schenectady, N. Y.	Jan. 16-22.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Madison, Wis.	February	Annual Automobile Show, Automobile Dealers' Division, Madison Ass'n of Commerce, Ordinance Bldg., Don E. Mowry, Mgr.
Oklahoma City	Jan. 17-22.....	Oklahoma City Motor Car Dealers' Ass'n, Auditorium, G. W. Woods, Mgr.	Roanoke, Va.	February	Annual Automobile Show, Roanoke Automobile Dealers' Ass'n, Auditorium, W. M. Shickle.
Toledo	Jan. 17-22.....	Annual Automobile Show, Toledo Automobile Shows Co., Terminal Auditorium, H. V. Buelow, Mgr.	Paterson, N. J.	February	Annual Automobile Show, Armory.
Milwaukee	Jan. 17-23.....	Annual Automobile Show, Milwaukee Automobile Dealers' Ass'n.	Rockford, Ill.	February	Annual Automobile Show, Rockford Automobile Trades Ass'n, Shrine Temple.
Kalamazoo, Mich.	Jan. 18-22.....	Annual Automobile Show, Kalamazoo Automobile Dealers Ass'n, Armory.	Logan, Utah.	Feb. 1-3.....	Annual Automobile Show, Cache Valley Automobile and Accessory Ass'n, N. W. Merkley, Pres.
San Francisco	Jan. 22-27.....	Second Annual Pacific Coast Automotive Equipment Exposition, Exposition Auditorium.	Tampa, Fla.	Feb. 3-12.....	Annual Automobile Show, in connection with South Florida Fair, Tampa Automobile Dealers' Ass'n, E. V. Plane, Mgr.
Baltimore	Jan. 22-29.....	Annual Automobile Show, Baltimore Automobile Dealers' Ass'n, 5th Regiment Armory, J. C. O'Brien, Mgr.	Minneapolis	Feb. 5-12.....	Northwestern Automobile and Industrial Exposition, Northwest Terminal Bldg.
Cleveland	Jan. 22-29.....	Annual Passenger Car Show, Cleveland Mfrs. and Dealers' Ass'n, Wigmore Coliseum.	Newburgh, N. Y.	Feb. 6-12.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
Montreal	Jan. 22-29.....	Annual Automobile Show, Montreal Automobile Trade Association, Motordrome Bldg.	Reading, Pa.	Feb. 7-11.....	Annual Automobile Show, Reading Automobile Dealers' Ass'n, Auditorium.
Holyoke, Mass.	Jan. 22-29.....	Annual Automobile Show, Holyoke Automobile Dealers' Ass'n, Appleton-Race Bldg.	Columbus	Feb. 7-12.....	National Tractor Show, Columbus Tractor and Implement Club, Ohio State Fair Grounds.
Amsterdam, N. Y.	Jan. 23-29.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Rochester, N. Y.	Feb. 7-12.....	Automobile Show, Rochester Automotive Trades Ass'n, Exposition Park.
Lawrence, Mass.	Jan. 24-29.....	First Annual Automobile Show, State Armory, W. H. Partian, Mgr.	Bridgeport, Conn.	Feb. 7-12.....	Annual Automobile Show, Bridgeport Automotive Ass'n, Inc., L. J. McCracken.
Columbus	Jan. 24-29.....	Annual Automobile Show, Columbus Automobile Show Co., Memorial Hall, Anson B. Coates, Mgr.	Tulsa, Okla.	Feb. 7-12.....	Annual Automobile Show, Tulsa Automobile Dealers Ass'n.
Chico, Cal.	Jan. 25-29.....	Annual Automobile Show, Butte County Automobile Trades Ass'n, H. E. Ward, Mgr.	Yonkers, N. Y.	Feb. 7-12.....	Annual Automobile Show, State Armory, W. H. Partian, director.
New Bedford, Mass.	Jan. 25-29.....	Annual Automobile Show, Armory, S. D. Peirce, Mgr.	Bucyrus, Ohio.	Feb. 9-12.....	Annual Automobile Show, Crawford County Automotive Trade Ass'n, C. J. Carmean, Sec'y.
Lancaster, Pa.	Jan. 26-29.....	Annual Automobile Show, Lancaster Automobile Trade Ass'n, Fairmount Garage, R. W. Schreiner, Mgr.	Kansas City	Feb. 12-19.....	Annual Automobile Show, Kansas City Motor Car Dealers' Ass'n, Ed Peake, Mgr.
Chicago	Jan. 29-Feb. 4..	National Passenger Car Show, Coliseum, National Automobile Chamber of Commerce.	Hartford, Conn.	Feb. 12-19.....	Annual Automobile Show, Hartford Automobile Dealers' Ass'n, Armory, Arthur Fifoot, Mgr.
York, Pa.	Jan. 29-Feb. 6..	Annual Automobile Show, York County Automobile Dealers' Ass'n, Overland Garage, A. H. Geesey, Mgr.	Fitchburg, Mass.	Feb. 13-19.....	Annual Automobile Show, Armory, W. H. Partian, Mgr.
Allentown, Pa.	Jan. 29-Feb. 12.	Annual Automobile Show, Lehigh Automotive Trades Ass'n, Association Bldg.	St. Louis	Feb. 14-19.....	Annual Automobile Show, St. Louis Automobile Manufacturers' and Dealers' Ass'n, Robert E. Lee, Mgr.
Hudson, N. Y.	Jan. 30-Feb. 5..	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Winnipeg	Feb. 14-19.....	Automotive Equipment Show, W. L. Williams, Secretary of Executive Committee.
London, Ont.	Jan. 31-Feb. 5..	National Motor Show of Western Ontario, Automotive Retailers' Ass'n, L. C. Kirby, Mgr.			

Trenton, N. J.....	Feb. 16-19.....	Annual Automobile Show, Trenton Automobile Trade Ass'n, Armory.	Des Moines	March 2-10.....	Annual Automobile Show, Coliseum, C. G. Van Vleet, Mgr.
San Bernardino, Cal....	Feb. 18-23.....	Annual Automobile Show in conjunction with National Orange Show, San Bernardino Automotive Trades Ass'n, Wichita Springs Park, Fred M. Renfro, Mgr.	Brooklyn	March 5-12.....	Annual Automobile Show, Brooklyn Motor Vehicle Dealers' Ass'n, 23rd Regiment Armory, George C. Lewis, Chmn.
San Francisco	Feb. 19-26.....	Fifth Annual Pacific Coast Show, Exposition Auditorium, George Wahlgren, Mgr.	Pittsburgh	March 5-12.....	Annual Automobile Show, Automotive Ass'n, Inc., Motor Square Garden, J. J. Bell, Mgr.
Albany, N. Y.....	Feb. 19-26.....	Annual Automobile Show, Albany Automobile Dealers' Ass'n, Armory, J. B. Wood, Mgr.	Springfield, Mass.	March 7-12.....	Annual Automobile Show, Springfield Automotive Ass'n, Auditorium, Harry W. Stacy, Mgr.
Pittsfield, Mass.	Feb. 20-26.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Indianapolis	March 7-12.....	Annual Automobile Show, Indianapolis Automotive Trade Ass'n, State Fair Grounds, John Orman, Mgr.
Deadwood, S. D.....	Feb. 21-26.....	Annual Automobile Show, Auditorium.	Newark, N. J.....	March 12-19.....	Annual Automobile Show, New Jersey Automobile Exhibition Co., 1st Regiment Armory.
Salt Lake City.....	Feb. 21-26.....	Annual Automobile Show, Intermountain Automotive Trade Ass'n, W. D. Rishel, Mgr.	Syracuse, N. Y.....	March 12-19.....	Annual Automobile Show, Syracuse Automobile Dealers' Ass'n, Armory, H. H. Smith, Mgr.
Louisville	Feb. 21-26.....	Annual Automobile Show, Louisville Automobile Dealers' Ass'n, Armory.	Boston	March 12-19.....	Annual Automobile Show, Boston Automobile Dealers' Ass'n, Mechanic Bldg. and South Armory.
Grand Rapids, Mich....	Feb. 21-26.....	Automobile Business Association, Furniture Exhibition Bldg., M. D. Elgin, Mgr.	Scranton, Pa.....	March 14-17.....	Truck and Tractor Show, Scranton Motor Trades Ass'n, Armory, H. B. Andrews, Mgr.
Elmira, N. Y.....	Feb. 21-26.....	Annual Automobile Show, Elmira Automobile Club, State Armory, H. S. Bryan, Mgr.	Omaha, Neb.....	March 14-19.....	Annual Automobile Show, Omaha Automobile Trade Ass'n, Omaha Auditorium, C. G. Powell, Mgr.
Manchester, N. H.....	Feb. 21-26.....	Annual Automobile Show, New Hampshire Automobile Dealers' Ass'n, Armory, C. E. Norris, Mgr.	Greenville, S. C.....	March 16-19.....	Annual Automobile Show, Greenville Dealers' Ass'n, Textile Hall.
Amarillo, Texas.....	Feb. 22-24.....	Annual Automobile Show, in conjunction with Buyers and Sellers Convention, Amarillo Automotive Ass'n.	Torrington, Conn.....	March 20-26.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
Binghamton, N. Y.....	Feb. 22-26.....	Annual Automobile Show, Binghamton Dealers' Ass'n, Armory, R. B. Moffitt, chmn.	Chattanooga, Tenn....	April	Annual Automobile Show, Chattanooga Automotive Trade Ass'n, Sunday Tabernacle.
Newton, Kan.....	Feb. 23-26.....	Annual Automobile Show, Harvey County Motor Trade Ass'n, Auditorium, Henry Marks, Mgr.	Gloversville, N. Y.....	April 3-9.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
Clinton, Iowa	Feb. 23-26.....	Annual Automobile Show, Clinton County Automobile Dealers' Ass'n, Coliseum, H. C. Finch, Sec'y.	Seattle	April 4-9.....	Annual Automobile Show, Motor Car Dealers' Ass'n, Arena-Hippodrome, W. J. Coyle, Mgr.
Malone, N. Y.....	Feb. 23-26.....	Annual Automobile Show.	Buffalo	April 11-16.....	Motors and Sportsmen's Show, Buffalo Automobile Club, Broadway Auditorium.
Buffalo	Feb. 26-Mar. 5.....	Annual Automobile Show, Buffalo Automotive Dealers' Ass'n, 74th Regiment Armory, C. C. Proctor, Mgr.			
Duluth, Minn.....	Feb. 28-Mar. 5.....	Annual Automobile Show, Duluth Automobile Trade Ass'n, Armory.			
Columbia, S. C.....	March	Annual Automobile Show, Columbia Automotive Trade Ass'n, State Fair Bldg., J. M. Green, Mgr.			
Schenectady, N. Y.	March	Annual Automobile Show, J. J. Callahan, Mgr.			
Wichita, Kan.....	March 1-5.....	Annual Automobile Show, Wichita Motor Trade Ass'n, Exposition Bldg., Henry B. Marks, Mgr.			
Wilmington, Del.....	March 1-5.....	Annual Automobile Show, Wilmington Automobile Trade Ass'n, Auditorium.			

CONVENTIONS

Milwaukee	Jan. 19.....	First Annual Convention, Wisconsin Automobile Dealers' Ass'n.
Chicago	Jan. 31-Feb. 1.....	Fourth Annual Convention, National Automobile Dealers Ass'n, Hotel La Salle.
Chicago	Feb. 2-4.....	First Annual Meeting Automotive Electric Service Ass'n, Hotel LaSalle, E. E. Turner, Asst. Sec.
Salt Lake City.....	Feb. 24-25.....	Annual Meeting, Intermountain Automotive Trades Ass'n.

What Would the Manufacturer Do Without the Jobber

(Continued from page 33)

manufacturers now find themselves, it has seemed remarkable to jobbers and distributors that while the factories were unable to supply the demand for merchandise during the seasonable season of 1920, along in August things eased up in such a manner that practically all manufacturers were able to deliver the monthly shipments which had been specified for February, March, April, May, June and July, practically at one time, leaving the jobber and distributor with enormous stocks of unseasonable merchandise and an unbalanced inventory at a time when it was practically impossible to move the goods

or to collect for them after being moved.

There was a good deal of discussion during the early months of 1920 when merchandise, which had been ordered at the prevailing prices of February, was unobtainable by those who had placed early orders, because where distributors and jobbers placed orders for immediate delivery at the new prices, the same stringency in merchandise did not seem to exist.

It has not been my observation that jobbers and distributors have lost any of their aggressiveness during the past few months, and so far as I am able to judge, there is no inclination upon their

part to withhold buying except in so far as it is absolutely necessary to do so because of unbalanced inventories and excessive accounts receivable.

The solution of the whole matter, to my mind, is dependent upon recognition by the manufacturer that there is only one sale made, which is from manufacturer to consumer, and the steps that are necessary in order to complete the transaction are all for the benefit of the manufacturer. They are: Manufacturer to distributor or jobber, jobber to dealer, dealer to consumer, and each party to the transaction should be paid for what he does in proportion.

"BUY NOW" MOVEMENT STARTS IN CLEVELAND

*Danger to Industry in Prolonged Stagnation Shown—
Would Avoid Shortage*

CLEVELAND, Jan. 10—Cleveland automobile manufacturers and retailers are taking a prominent part in a "buy now campaign," which was inaugurated by the Cleveland Chamber of Commerce, and has now developed into a co-ordinated civic movement to start buying on a large scale.

"Buy now—conservatively—cautiously—but NOW."

That is the slogan that is being given to thousands of individuals, corporations and partnerships in the Ohio district. The declaration of the Chamber of Commerce has attracted nation-wide attention, and it has been taken up by the Milwaukee Chamber of Commerce and similar organizations in other cities.

The declaration of the Cleveland Chamber of Commerce is made up of a report which was framed by representatives of the Manufacturers and Wholesale Merchants Board, the Retail Merchants Board and the industrial development committee of the chamber. The men who wrote the report are representative of every industry in the city, both productive and seller.

MILLER HOLDS CARS RESPONSIBLE FOR ROADS

ALBANY, N. Y., Jan. 7—Increase in motor vehicle fees so that enough revenue would be produced to pay for all the cost of maintaining highways was urged by Governor Miller in his address to the legislature at the opening session this week. Motor traffic makes such maintenance necessary, Governor Miller said, and should be obliged to bear the expense of it.

His message throughout was for strictest economy and retrenchment in administration during the year.

BROOKLYN SERVICE MEN ELECT 1921 OFFICERS

NEW YORK, Jan. 4—The Automotive Service Association of Brooklyn, N. Y., at its annual meeting last night elected the following officers: President, Gillman T. McFarland; vice-president, Herbert L. Bailey; secretary and general manager, Fred M. Smith; treasurer, Harvey J. Wechtel. The following directors were elected, the first three to serve for two years and the last three to serve for one year: Charles Tate, Edgar H. Carroll, Charles Dinguid, Edward C. Krieger, N. W. Durnin, Frederick C. Cabot. The election was followed by the presentation of the silver loving cup which was presented to the Brooklyn association as winner of the baseball series. President McFarland also delivered an address on the subject of Pirate Parts.

CHANGES In the Trade

Albert F. Werner, Chicago, has been appointed distributor of the Commonwealth car in Illinois and ten counties of Northern Indiana.

J. R. Overstreet has been appointed Fort Worth branch manager for the Hupmobile. Formerly this territory had been handled through the Dallas office.

Tire Sales Corp. of America, Philadelphia, has taken possession of the store formerly occupied by the Cleveland Tractor & Implement Co. and is distributing Zest tires.

Creel Motor Co., of Birmingham, Ala., has taken over the agency and nearby distributing territory for the Premocar, manufactured by the Preston Motors Co., of Birmingham.

Jerome T. Stack, who has been identified with motor business in Baltimore for a decade, has become sales manager for Felix V. Goldsborough, Standard 8 distributor in Baltimore.

Frank Weinberger Automobile Parts Co., of New Orleans, has been appointed distributor for the Continental Motors Co., and for the parts of this motor for Louisiana, southern Mississippi and a part of eastern Texas.

L. G. Hartdorn will be New York representative of the E. G. Mfg. Co., New York. He was formerly with the Beckley-Ralston Co. E. L. Pollak has been appointed representative in Atlantic Coast territory.

Dan B. Hurlbut has been appointed factory representative of the Kroyer Motors Co., Stockton, Cal., which is now producing the Wizard 4-pull tractor. He was formerly with the International Harvesting Co. of San Francisco.

C. A. Bishop has been promoted to the position of Western sales manager of the Hart-Parr Co. and will have headquarters at the factory, Charles City, Iowa. John P. Gregg has been appointed Northwestern sales manager.

A. J. Whipple has been appointed general sales manager of the Republic Truck Sales Corp., selling company for Republic Motor Truck Co. He was formerly general sales manager for Diamond T and is widely known in the industry.

Harry A. Mayer, who for a long period has been identified with Baltimore's automobile row, and who for five years has been vice-president and general manager of the United Auto Sales Co., Studebaker distributors, has resigned. Mayer has no plans to announce at this time.

C. L. Schnuerer, for the past five years with the sales department of the Hart-Parr Co., has severed his connection to enter the distributing business. He has joined the forces of the East Iowa Hart-Parr Co., Cedar Rapids, which handles the distribution of Hart-Parr tractors in that territory.

Harry A. Reed, who has been well known to the tractor trade for the past fifteen years and who for the past five years has been with the Hart-Parr Co. as western sales manager, has entered the distributing business at Omaha. Reed has taken over control as general manager of the Omaha Tractor & Supply Co., who distribute Hart-Parr tractors and tractor-drawn machinery for Nebraska and southwestern Iowa.

HARBECK TO CONFINE TIME TO INDUSTRY

*Resigns Connection with
American Can to Develop
Automotive Interests*

NEW YORK, Jan. 6—J. R. Harbeck has resigned as vice-president and director of the American Can Co. in order to devote all his time to his automobile interests. He felt that it was unfair to remain an officer of the Can company when he was able to give it so little of his attention.

Harbeck for some months past has been devoting himself to the affairs of the various John N. Willys enterprises, in which he is a director, and to the reorganization of the Maxwell and Chalmers companies. He is vice-chairman of the reorganization committee, which is headed by Walter C. Chrysler, executive vice-president of the Willys companies.

It is expected the Maxwell-Chalmers consolidation plan, which has been approved by a large majority of the stockholders and creditors, will be declared operative about the middle of this month.

YOUNGSTOWN DEALERS ELECT NEW OFFICERS

YOUNGSTOWN, OHIO, Jan. 10—H. A. Froom, Oakland dealer, was elected president of the Youngstown Automobile Dealers Association at the annual meeting Jan. 3. He succeeds Leo J. Collier, who recently was elected to the board of trustees of the Ohio Automobile Trades Association.

The board of trustees was elected as follows: B. P. Higby, Albert Elton, James A. Henderson, F. B. Smith, D. A. Heindel and the president. Other officers named were: First vice-president, B. P. Higby; second vice-president, Albert Elton; secretary-treasurer, L. M. Shaw (re-employed for his fourth year).

The budget committee reported a program calling for the expenditure of \$6,300 in 1921. The annual dues of \$300 per member, fixed in 1920, were unchanged.

Henry County Dealers Form

CAMBRIDGE, ILL., Jan. 6—The Tri-County Automotive Trade Association, composed of dealers in Henry, Stark and Bureau counties, this State, has been reorganized as the Henry County Automotive Trade Association, the former territory having been considered too large.

Goodrich Fifty Years Old

AKRON, OHIO, Jan. 7—The B. F. Goodrich Co. is commemorating the fiftieth anniversary of its founding by Dr. B. F. Goodrich, by publishing a 48-page book called the "Golden Year of Goodrich." The book tells the story of the rubber industry, its history, and what has been its part in the progress and development of the world.

INDUSTRIAL DEPRESSION HITS TIME PAYMENTS

NEW LONDON, CONN., Jan. 8—Echoes of the industrial depression are being heard from automotive dealers throughout the state, especially from communities depending wholly, or in part, on textile and allied industries, relative to the abnormal number of attachments reported within the past two weeks to satisfy notes and bills which have been overdue for a number of months. The attachments include automobiles, motor trucks, machinery, tools and realty. Many of these have been brought on by the shortage of work in the woolen mills. More attachments are expected to satisfy payments on automobiles, as there have been a large number sold on monthly payment plans. When the payments have been allowed to fall behind for several months, the buyer finds it almost impossible to catch up, under present conditions. Many of the mill employees who have bought on

the partial payment plan have been waiting eight or ten weeks for work and then the mills only operate two or three days a week.

CHICAGO TIRE DEALERS PLAN NATIONAL BODY

CHICAGO, Jan. 8—Invitations have been sent out by the Chicago Tire Dealers Association to all similar associations throughout the country to attend a convention to be held at the Morrison Hotel, this city, Jan. 31, Feb. 1 and 2, for the purpose of forming a national organization. If necessary the meeting will be carried over to Feb. 3.

There are now fifteen tire dealers associations with others springing up almost over night. Frank Zeman, president of the Chicago organization, is making arrangements for the convention with the assistance of the association members, and is working on a program to be presented to the dealers when they convene.

FREE SERVICE GIVEN DRAINING CRANKCASES

MILWAUKEE, Jan. 7—The Wadhams Oil Co., one of the leading independents, has come forward with an idea that is unique in this locality which refers to the oft-repeated admonition to private owners to "Drain your crankcase every 500 miles." The Wadhams company has established two stations where it gives free service in changing crankcase lubricant. Its advertisements say:

"Free station service for the job you hate and neglect. Bring your car here for free drainage. We will empty the old oil and sediment from your crankcase, flush it out scientifically and refill with fresh new oil of the correct weight, without charge for anything except the new oil used. And we will keep doing it for every 500 miles that you run; recording your speedometer readings and reminding you of the time for replacement of oil as an important part of this free service."

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Pump Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Pump Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Pump Capacity	
Allis-Chalm.	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	G-O	14-28	\$1485	4	Wauk.	4-4 1/2 x 5 1/2	Ker.	3	Pioneer	18-36		4	Own	4-5 1/2 x 6	Ker.	4	
Allis-Chalm.	10-18		3	Own	2-5 1/2 x 7	G.K.	2-3	Grain Belt	18-36	2500	4	Wauk.	4-1 1/2 x 6 1/2	GorK	4	Pioneer	30-60	\$1995	4	Own	4-7 x 8	G.	10	
Allis-Chalm.	18-30		4	Own	4-1 1/2 x 8 1/2	G.K.	3-4	Gray	18-36		3	Wauk.	4-1 1/2 x 6 1/2	G.K.	4	Portman	15-30		4	Buda	4-4 1/2 x 6	G.K.	4	
Allwork	11		4	Own	4-4 1/2 x 6	GorK	3	Ground Hog	20-30	2500	4	Beav.	4-4 x 6	Ker.	4	Port Huron	12-25	1700	4	Chief	4-4 1/2 x 6	G.K.	3	
Andrews Kin.D	14-28		4	Own	4-5 x 6	G.K.	3	Gr. Western St	20-30	1850	4	Beav.	4 1/2 x 6	K.	4	Post	12-20		4	Wauk.	4-4 1/2 x 5 1/2	GorK	2	
Appleton	15-36	\$1500	4	Clim.	4-5 1/2 x 6 1/2	GorK	4	Hart-Parr	20	1195	4	Own	2-5 1/2 x 6 1/2	K.D	3	Prairie Dog	9-18		3	Wauk.	4-3 1/2 x 5 1/2	Gas.	2	
Aultman-T.	12-20		4	Buda	4-1 1/2 x 5 1/2	G.K.	2-3	Hart-Parr	30	1595	4	Own	2-6 1/2 x 7	K.D	3	Prairie Dog	15-30		4	Wauk.	4-4 1/2 x 6	Gas.	3	
Aultman-T.	15-30		4	Clim.	4-5 x 6 1/2	G.K.	4	Heider	D	9-16	4	Wauk.	4-1 1/2 x 5 1/2	G.K	2	Ranger	8-16	1250	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	
Aultman-T.	22-45		4	Own	4-5 1/2 x 6	G.K.	6	Heider	C	12-20	4	Wauk.	4-4 1/2 x 6 1/2	G.K	3	Reed	15-30	2195	4	Dom	4-1 1/2 x 6	K	3-4	
Aultman-T.	30-60		4	Own	4-7 x 9	G.K.D	8	Heider	Calc	6-10	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Reliable	10-20	985	4	Own	2-6 x 7	G.K.D	2	
Automot. B-3	12-24		4	Hercle	4-4 x 5 1/2	G.K.	2-3	Hicks	15-30	1750	4	Wauk.	4-4 1/2 x 6	KorG	4	Reo	12-25	1600	4	Wauk.	4-1 1/2 x 5 1/2	G.K.D	3	
Avery-SR-Cal	5-10		3	Own	4-3 x 4	G.K.	2	Huber	12-25	1385	4	Wauk.	4-4 1/2 x 5 1/2	G.K.D	3	Samson			4	Own	4-4 x 5	G.K	2	
Avery Cult			3	Own	6-3 x 4	G.K.										Sandusky			4	Own	4-1 1/2 x 5 1/2	G.K.D	2	
Avery Plan			3	Own	6-3 x 4	G.K.										Sandusky			4	Own	4-5 x 6 1/2	G.K.D	4	
Avery B	5-10		4	Own	4-3 x 4	G.K.	2	Illinois	C	18-36	2375	4	Clim.	4-5 x 6 1/2	G.K	4	Shawnee	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Avery C			4	Own	4-3 x 4	G.K.	2	Imperial	40	40-70	5000	4	Own	4-7 1/2 x 9	G.K.D	10	Shawnee	9-18		2	Gray	4-3 1/2 x 5	Gas.	2
Avery	8-16		4	Own	2-5 1/2 x 6	G.K.D	2-3	Indiana		8-10		2	LeR.	4-3 1/2 x 4	Gas.	1	Shawnee	9-18		2	Gray	4-3 1/2 x 5	Gas.	2
Avery	12-25		4	Own	2-6 1/2 x 7	G.K.D	3-4	International		8-16		4	Own	4-4 1/2 x 5	G.K.D	2	Shawnee	9-18		2	Gray	4-3 1/2 x 5	Gas.	2
Avery	14-28		4	Own	4-4 1/2 x 7	G.K.D	3-4	International		15-30		4	Own	4-5 1/2 x 8	G.K.D	4	Shelby	9-18		2	Gray	4-3 1/2 x 5	Gas.	2
Avery	18-36		4	Own	4-5 1/2 x 6	G.K.D	4-5	J-T	N	16-30	*2	Chief	4-4 1/2 x 6	G.K	3-4	Shelby	15-30		4	Beav.	4-4 1/2 x 6	G.K	3	
Avery	25-50		4	Own	4-6 1/2 x 7	G.K.D	5-6	Kardel Util.								Short Turn	20-40	1500	3	Clim.	4-5 x 6 1/2	K.G	3	
Bates All St.	45-65		4	Own	4-7 1/2 x 8	G.K.D	8-10	Kardel Util.	12-25	1652	4	Midw.	4-4 1/2 x 5 1/2	GorK	3	Square T	18-35		3	Clim.	4-5 x 6 1/2	K.G	3	
Bates S.M.	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Koch-Gon	15-30	1650	4	Own	2-7 1/2 x 8	G.K	3	Steady Pull	12-24	1485	4	Own	4-4 x 5	Gas.	3	
Bates	15-22		*4	Own	4-4 1/2 x 6	G.K.D	3	Klumb	16-32		4	Clim.	4-5 x 6 1/2	...	...	Stearns	2 15-30	2300	4	Own	4-4 1/2 x 6 1/2	G.K	4	
Bean	8-16		*1	Own	14-3 1/2 x 4	G.K	2-3									Stearns	18-36		4	Beav.	4-4 1/2 x 6	G.K	4	
Boeman	2-4	340	2	Own	1-3 1/2 x 4 1/2	Gas.	2-3	LaCrosse	M	7-12	950	4	Own	2-4 x 6	G.K	3	Steele	20-40		4	Beav.	4-4 1/2 x 6	G.K	4
Best	30	3250	*2	Own	4-4 1/2 x 6 1/2	G.K.D	4	LaCrosse	G	12-24	1250	4	Own	2-6 x 7	Ker.	3	Tiege	15-27	2625	...	Wic.	4-4 1/2 x 6	G.K	3-4
Best	60	5750	*2	Own	4-6 1/2 x 8 1/2	G.K.D	8-1	Lauson		15-25		4	Beav.	4-4 1/2 x 6	G.K.D	3	Titan	10-20		4	Own	2-6 1/2 x 8	G.K.D	3
Boring			3	Wauk.	4-4 1/2 x 6 1/2	GorK	2	Lauson		15-30		4	Beav.	4-1 1/2 x 6	G.K.D	3-4	Tillmore	A	2-6	385	Vur.	1-4 x 4	G.K	4
Bull	12-24	1200	3	Toro	2-5 1/2 x 7	G.K	3	Lauson Read		15-30		4	Beav.	4-4 1/2 x 6	G.K.D	2-3	Topp	B	30-45	4000	Wauk.	4-4 1/2 x 6 1/2	Gas.	4-6
Burns Oil	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3	Leader	B	12-20		4	Own	2-6 x 6 1/2	G.K.D	2-3	Tore		6-12	950	LeR.	4-3 1/2 x 4 1/2	Gas.	2
Capital	15-30	1500	2	Own	4-4 1/2 x 6	Gas.	33	Leader	N	16-32		4	Clim.	4-5 x 6 1/2	G.K	3-4	Traylor		6-12	815	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Case	10-18	1200	4	Own	4-3 1/2 x 5	G.K.D	2-3	Leader	C	18-36		4	Clim.	4-5 x 7 1/2	G.K.D	4-6	Triumph	H	18-36	2450	Erd.	4-4 1/2 x 6	Ker.	4
Case	15-27	1800	4	Own	4-4 1/2 x 6	G.K.D	4	Leonard	E	20-30	2530	4	Buda	4-4 1/2 x 6	G.K	3	Turner		14-25		Buda	4-4 1/2 x 5 1/2	G.K	3
Case	22-40	3100	4	Own	4-5 1/2 x 6 1/2	G.K.D	4-5	Liberty		18-32	2475	4	Clim.	4-5 x 6 1/2	G.K	4	Twin City		12-20		Own	4-4 1/2 x 6	G.K	3
Caterpillar	25-40	*2	Own	4-4 1/2 x 6	Gas.	4	Little Bear		4	850	4	Ford	4-3 1/2 x 4	Gas.	4	Twin City		20-35		Own	4-5 1/2 x 6 1/2	G.K	5	
Caterpillar	40-60	*2	Own	4-6 1/2 x 7	Gas.	6	Little Giant B		16-22	2200	4	...	4-4 1/2 x 5	K	4	Twin City		40-65		Own	4-7 1/2 x 9	G.K	5	
Chase	12-25	1785	3	Buda	4-4 1/2 x 5 1/2	G.K.D	2-3	Little Giant A		26-35	3300	4	...	4-5 1/2 x 6	K	6	Uncle Sam				Wid	4-4 1/2 x 5 1/2	Ker.	2
Chetrac	W	12-20	1495	*2	Own	4-4 x 5 1/2	G.K.D	2-3	Lombard	35-150	*2	Own	4-5 1/2 x 6 1/2	...	...	Uncle Sam	10-18	1485	4	Beav	4-4 1/2 x 6	Ker.	3-4	
Dakota	15-27	1750	3	Dom.	4-4 1/2 x 6	G.K	3-4	Macultivator	1 1/2	225	2	Wauk.	1-2 1/2 x 3 1/2	Gas.	3	Universal	1-4	475	2	Own	1-3 1/2 x 5	G	1	
Dart	B.J.	15-30	2000	4	Buda	4-4 1/2 x 6	Gas.	3-4	Magnet	14-25		4	Wauk.	4-4 1/2 x 6 1/2	K&G	3	Utilite	15-30	380	2	Own	1-3 1/2 x 5 1/2	Gas.	3 1/2
Dill	20	2480	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Market	2-4 1/2		4	Vur.	1-4 x 4	Gas.	1	Valie	12-24	1750	4	Own	4-4 1/2 x 5 1/2	G.K.D	3	
Do-it-All		598	4	Own	2-7 x 8	Ker.	3	Master Jr.	4-8		2	LeR.	2-3 1/2 x 4	Gas.	1	Victory	9-18	1385	4	Gray	4-3 1/2 x 5	Gas.	2	
Eagle	12-22	1390	4	Own	2-8 x 8	Ker.	3	Merry Gar		2	230	2	Evin	1-2 1/2 x 2 1/2	Gas.	1-2	Victory	15-30	1750	4	Wauk.	4-4 1/2 x 5 1/2	Gas.	3
Eagle	16-30	1850	4	Own	4-4 1/2 x 5	Ker.	3	Minne. All-P	12-25	1325	4	Own	4-4 1/2 x 7	GorG	3	Vim	10-20	1295	...	Wauk.	4-3 1/2 x 5 1/2	G.K	2-3	
E-B	AA	12-20	4	Own	4-4 1/2 x 5	Ker.	3	Mohawk	8-16	785	2	Own	4-3 1/2 x 4 1/2	KorG	1-2	Wallis	K	15-25		4	Own	4-4 1/2 x 5 1/2	G.K.D	3
E-B	Q	12-20	4	Own	4-4 1/2 x 5	Ker.	3	Moline Univ.	9-18	1325	2	Own	4-3 1/2 x 5	Gas.	2-3	Waterloo		12-25		4	Own	2-6 1/2 x 7	G.K.D	3
E-B	D	16-32	4	Own	4-5 1/2 x 7	Ker.	4	Moline Orch.	9-18	1375	2	Beav	4-4 1/2 x 6	Ker.	4	Webfoot		28-53	5250	*2	Wisc.	4-5 1/2 x 7	G.D	6
E-B Reeves	40-65	4	Own	4-7 1/2 x 9	Ker.	8-10	Monarch	30-18	2250	*2	4	Buda	4-4 1/2 x 6	Gas.	3	Wellington		12-22		4	...	4-4 x 4	Kor.	2-3
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G.K	4	Metex	15-30	2250	4	...	4-5 1/2 x 6 1/2	K	6	Wellington		16-30		4	...	4-4 1/2 x 6	Ker.	3-4
Fagel	9-12	1525	4	Lyc.	4-3 1/2 x 5	G.K.D	2									Wetmore		12-25	1650	4	Wauk.	4-4 x 5 1/2	G.K	2-3
Farm Horse.	18-30	1685	4	Clim.	4-5 x 6 1/2	G.K	3-4	New Britain. 1	3-6	450	...	Own	2-3 1/2 x 4	Gas.	...	Whitney		9-18	1175	4	Own	2-5 1/2 x 6 1/2	Gas.	2
Farguhar	15-25	2395	3	Buda	4-4 1/2 x 6	G.K.D	3-4	New Britain. 2	3-6	500	...	Own	2-2 1/2 x 4	Gas.	...	Wichita		15-30	2500	4	Beav.	4-4 1/2 x 6	Ker.	3-4
Farguhar	18-35	4	Own	4-6 x 8	G.K.	4-5	Nelson Spec.	10-20			4	Wauk.	4-3 1/2 x 5 1/2	Gas.	2	Wisconsin	E	16-30		4	Clim.	4-5 x 6 1/2	G.K.D	4
Farguhar	25-50	4	Own	4-7 x 8	G.K.	6-7		Oil Pull	12-20		4	Own	2-6 x 8	K.D	3	Zelle		12-25		4	...	4-4 1/2 x 5 1/2	Ker.	3
Fitch	20-35	4	Clim	4-5 x 6 1/2	G.K.D	3-4		Oil Pull	16-30		4	Own	2-7 x 8 1/2	K.D	4									
Flour City	20-35	4	Own	4-5 1/2 x 6	Ker.	4		Oil Pull	20-40		4	Own	2-8 x 10	K.D	5-6									
Flour City	30-50	4	Own	4-6 1/2 x 7	Ker.	6-8		Oil Pull	30-60		4	Own	2-10 x 12	K.D	8-10									
Flour City	40-70	4	Own	4-7 1/2 x 9	Ker.	8-1		Oldsmar	1 1/2	5	395	2	Own	1-5 1/2 x 5 1/2	GorK	3								

Specifications of Current Models of Passenger Cars

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....	H-S	6-3 1/2 x 5	115	32x4	\$2260	\$2260				Madison.....	Ow.	6-3 1/2 x 5	115	33x4	\$1570	\$1570			
Allen.....	Series 43	6-3 1/2 x 5	110	32x4	\$1595	\$1595			\$2395	Maibohm.....	B	6-3 1/2 x 5 1/4	116	32x4	1575	1575		\$2395	\$2295
American.....	C	6-3 1/2 x 5	127	32x4	2395	2395	\$2475	\$3295	3495	Marmion.....	34	6-3 1/2 x 5 1/4	136	32x4 1/2	5300		\$5000	6150	6600
Anderson.....	Cont.	6-3 1/2 x 4 1/2	120	33x4	2195	2145	2195	3200	3200	Maxwell.....	25	6-3 1/2 x 5 1/4	109	30x3 1/2	995	995		1595	1695
Apperson.....	820-S	8-3 1/2 x 5	130	34x4 1/2		\$3500	3500	4500	4500	McFarlan.....	147	6-4 1/2 x 6	140	35x5	6300	6300	6300	7500	7500
Apperson.....	Anniversary	8-3 1/2 x 5	130	34x4 1/2		4250	4250	6000	6000	Mercer.....	Series 5	6-3 1/2 x 5 1/4	132	32x4 1/2	3015	3950		5150	5550
Auburn.....	639 H-K	6-3 1/2 x 4 1/2	120	32x4	1945	1895		2095	2995	Meteor.....	K & R	4-4 1/2 x 6	129	32x4 1/2	5500	5500			
										Metz.....	M6	6-3 1/2 x 5	120	32x4	1995	1995		2785	2885
Beggs.....	20T	6-3 1/2 x 4 1/2	120	33x4		2000				Mitchell.....	F-40	6-3 1/2 x 5	120	33x4	1750	1750		2800	2900
Bell.....	H-S	4-3 1/2 x 5	114	31x4	1495	1495				Monitor.....	S-3	6-3 1/2 x 4 1/2	121	33x4	2475	2475		3475	
Biddle.....	B1	4-3 1/2 x 5 1/4	121	32x4	3750	3750	3950			Monroe.....	S-9	4-3 1/2 x 4 1/2	115	32x3 1/2	1140	1140			
Bour-Davis.....	21	6-3 1/2 x 5 1/4	126	33x4 1/2	2585	2535	2585			Moon.....	6-48	6-3 1/2 x 4 1/2	122	32x4	2085	1985		2985	2985
Bradley.....	Four	4-4 x 5 1/2	125	34x4 1/2		1265				Moon.....	6-68	6-3 1/2 x 5 1/4	175	32x4 1/2	2555		2195	3455	3485
Brewster.....	Ow.	4-4 x 5 1/2	125	34x4 1/2		19000			10500	Moore.....	30	4-3 x 5	106	30x3 1/2		1095			
Briscoe.....	4-34	4-3 1/2 x 5	109	31x4	1285	1285		1885	1885	Murray.....	Ow.	8-3 1/2 x 5	128	34x4 1/2		3500			
Brook.....	S-21	2-3 1/2 x 3.67	90	28x3	395														
Buick.....	21-44-5-6-7	6-3 1/2 x 4 1/2	118	33x4 1/2	1795	1795		2585	2895	Nash.....	681-6	6-3 1/2 x 5	121	33x4	1695	1695	1850		2895
Buick.....	21-48-9-50	6-3 1/2 x 4 1/2	124	34x4 1/2			2065	2985	3295	Nash.....	682	6-3 1/2 x 5	127	34x4 1/2		1875	2650		2895
										National Sextet.....	BB	6-3 1/2 x 5 1/4	130	32x4 1/2	3750	3750	4900		4950
Cadillac.....	59	8-3 1/2 x 5 1/4	125	34x4 1/2	3990	3990	4090	4600	4950	Nelson.....	D	4-3 1/2 x 4 1/2	104	32x4		1700			
			132	35x5			3740	4990		Noma.....	1C	6-3 1/2 x 4 1/2	128	32x4 1/2	3000	3200			
Case.....	V	6-3 1/2 x 5 1/4	126	34x4 1/2		2650	2650	3400	3750	Norwalk.....	430-KS	4-3 1/2 x 5	116	32x3 1/2		1385			
Chalmers.....	6-30	6-3 1/2 x 5 1/4	117	32x4	1795	1755		2395	2745										
Chalmers.....	630	6-3 1/2 x 4 1/2	122	33x4 1/2			1945			Oakland.....	34-C	6-2 1/2 x 4 1/2	115	32x4	1395	1395		2065	2065
Champion.....	C4	4-3 1/2 x 5	118	32x4	1595	1595				Ogren.....	6-60	6-3 1/2 x 5 1/4	134			3750		5200	
Chandler.....	Ow.	6-3 1/2 x 5	123	33x4	1895	1895	2895	2995		Oldsmobile.....	46	8-2 1/2 x 4 1/2	122	33x4 1/2		2100	2100		3300
Chevrolet.....	490	6-3 1/2 x 4 1/2	102	30x3 1/2	795	820	1325	1375		Oldsmobile.....	37-A	6-2 1/2 x 4 1/2	112	32x4	1450	1450		2145	2145
Chevrolet.....	FB	6-3 1/2 x 5 1/4	110	33x4	320	1345	2075	2075		Overland.....	4	4-3 1/2 x 4	100	30x3 1/2	895	895		1425	1475
Cleveland.....	40	6-3 x 4 1/2	112	32x4	1435	1435	2345	2445		Owen Magnetic.....	60	6-4 x 5 1/2	142	35x5	7000	7000	7000	8000	8500
Climber Four.....	H-S	4-3 1/2 x 5	117	33x4	1550	1550													
Climber Six.....	H-S	6-3 1/2 x 5	125 1/2	32x4 1/2	27.0	2750	3250			Packard.....	Six	6-3 1/2 x 4 1/2	116	33x4 1/2	2795	2795		4150	4250
Cole.....	870	8-3 1/2 x 4 1/2	127	33x5	3250	3250	4250	4450		Packard.....	Ow.	12-3 x 5	136	35x5	6000	6000	6000	8200	8450
Columbia.....	D-C & CS	6-3 1/2 x 4 1/2	115	32x4	1945	1795	2895	2895		Paige.....	6-42	6-3 1/2 x 5	119	32x4	1700	1700		2593	2645
Comet.....	C-53	6-3 1/2 x 5 1/4	125	33x4 1/2		2350				Paige.....	6-66	6-3 1/2 x 5	131	33x4 1/2		2795	3675	3750	
Commonwealth.....	H-S	4-3 1/2 x 5	117	32x4	1785	1595		2465		Pan.....	A	4-3 1/2 x 5	108	33x4		1500			3600
Crawford.....	21-6-40	6-3 1/2 x 5 1/4	122 1/2	32x4	3000	3000	3000	4500	4500	Pan American.....	H-S	6-3 1/2 x 5	121	33x4	2450		18.5	2895	2895
Crow-Elkhart.....	153-55	4-3 1/2 x 5	117	32x3 1/2	1295	1295		2195		Patterson.....	65	6-3 1/2 x 4 1/2	120	33x4		18.5	19.3	2895	2895
Crow-Elkhart.....	H53-55	6-3 1/2 x 5	117	33x4	1545	1545		2395		Peerless.....	56	8-3 1/2 x 5	125	34x4 1/2		3200	3230	3920	4140
Cunningham.....	V-3	8-3 1/2 x 5	132	35x5						Piedmont.....	4-30	4-3 1/2 x 5	116	32x3 1/2		1485			
										Piedmont.....	6-40	6-3 1/2 x 4 1/2	122	32x4		10.5			
Daniels.....	D	8-3 1/2 x 5 1/4	132	34x4 1/2	4850	4850	6250	6950		Pierce-Arrow.....	48	6-4 1/2 x 5 1/2	142	35x5	7900	7900	8000	9000	
Davis.....	51-57	6-3 1/2 x 4 1/2	120	33x4	2125	2085	2250	3085	3085	Pierce-Arrow.....	38	6-4 x 5 1/2	134	34x4 1/2	1945	1895		2850	2900
Dispatch.....	G	4-3 1/2 x 5	120	34x4	1290	1350	1525	1575		Pilot.....	6-45	6-3 1/2 x 5	142	35x5	67.0	Chr. sis	Price		
Dixie Flyer.....	H-S-70	4-3 1/2 x 5	112	32x4	1595	1595	2370	2370		Porter.....	45	4-4 1/2 x 6 1/2	142	35x5	4600	4600	4600	5600	6100
Dodge Brothers.....	Ow.	4-3 1/2 x 4 1/2	114	32x3 1/2	1235	1285	1900	2150		Premier.....	6-D	6-3 1/2 x 5 1/4	126 1/2	32x4 1/2		1295			
Dorris.....	6-80	6-4 x 5	132	33x5	1475	4785	5860	6690		Premocor.....	6-40 A	6-3 1/2 x 4 1/2	117	32x3 1/2		3865			
Dort.....	15	4-3 1/2 x 5	105 1/2	31x4	1215	1215	1865	1995				4-4 x 6	117	32x4 1/2					
Dupont.....	A	4-3 1/2 x 5 1/4	124	32x4 1/2	3400	3400		4900		Ranger.....	A-2	4-3 1/2 x 5	116	32x4		1850			
										R & V Knight.....	R	4-3 1/2 x 5	115	32x4		2150			2700
Eclair.....	D.H.K.G.	4-3 1/2 x 5	117	33x4		1495	1495	2095	2195	R & V Knight.....	J	6-3 1/2 x 4 1/2	127	32x4 1/2	3350	3350	3550		4400
Eclair.....	D.H.K.G.	6-3 1/2 x 4 1/2	117	33x4		1795	1795	2395	2495	Reo.....	T-6	6-3 1/2 x 5	120	33x4	1850	1850		2700	2750
Elgin.....	K	6-3 1/2 x 4 1/2	118	33x4	1895	1775	2885	2885		Reo.....	C	4-4 1/2 x 6	131	32x4 1/2	4850	4650	4650		6500
Essex.....	A	4-3 1/2 x 5	108 1/2	32x4	1595	1595		2100	2450	Revere.....	C-6-54	6-3 1/2 x 5 1/4	128	32x4 1/2					
										Roamer.....	D-4-75	4-4 x 6	128	32x4 1/2					
Ferris.....	Cont.	6-3 1/2 x 5 1/4	130	32x4 1/2			*3350		4875	Rock Falls.....	Ow.	6-3 1/2 x 5 1/4	136	35x5				4500	5000
Ford.....	T	4-3 1/2 x 4	100	30x3 1/2	395	440		745	795	Saxon.....	125	4-3 1/2 x 5	112	32x4		1895		2795	2795
Franklin.....	9-B	6-3 1/2 x 4	115	32x4	2400	2600	2500		3600	Sayers.....	Six-42	6-3 1/2 x 4 1/2	118	33x4	2595	2195			3295
Friend.....	Ow.	4-3 1/2 x 4 1/2	112	32x3 1/2	1585	1585		2485	2585	Scripps-Booth.....	Six-B	6-2 1/2 x 4 1/2	115	32x4	1545	1545		2215	2295
										Seneca.....	L	4-3 1/2 x 4 1/2	108	30x3 1/2	1185	1185			
Grant.....	HX	6-3 1/2 x 4 1/2	116	32x4	1550	1550		2450	2450	Severin.....	Six	6-3 1/2 x 5 1/4	122	32x4		2400			
Gardner.....	Lye.	4-3 1/2 x 5	112	32x3 1/2	1195	1195		2145		Sherridan.....	8	4-3 1/2 x 5 1/4	116	33x4	1635	1685			
										Sherridan.....	8	8-3 1/2 x 4 1/2	132	33x5					
Halladay.....	M	6-3 1/2 x 5	122	33x4		2285			3250	Singer.....	Series 20	6-2 1/2 x 5	138	33x5	6500	6500	6500		8600
Handley-Knight.....	Knight	4-4 1/2 x 4 1/2	125	32x4 1/2		2985				Skelton.....	35	4-3 1/2 x 5	112	32x3 1/2	1245	1245			
Hanson.....	54	6-3 1/2 x 4 1/2	121	32x4	2365	2365	2465	2885	2885	Standard.....	Ow.	8-3 1/2 x 5	127	34x4 1/2					
Hatfield.....	H-S	4-3 1/2 x 5	115	32x4	1695	1695				Stanley Steamer.....	Ow.	2-4 x 5	130	34x4 1/2		3350	3950	5650	5775
Haynes.....	47	6-3 1/2 x 5	132	34x4 1/2	12685	2935	2935	3650	4250	Stearns.....	SKL4	4-3 1/2 x 5 1/4	125	34x4 1/2	2550	2450	2675	3100	3700
Haynes.....	48	12-2 1/2 x 5	132	34x4 1/2	13635	3635	4350	4950		Stephens.....	80	6-3 1/2 x 4 1/2	122	33x4 1/2	2400	2400	2400	3100	3400
Huffman.....	R	6-3 1/2 x 4 1/2	120	32x4	1995	1995		2975		Stevens Duryea.....	Ow.	6-4 1/2 x 5 1/2	138	35x5	7800		8000	9000	9500
H.C.S.....	Weid.	4-3 1/2 x 5 1/4	120	32x4 1/2	2925	12975				Studebaker.....	EJ-40	6-3 1/2 x 4 1/2	112	32x4	1850	1485		2450	
Hollier.....	206-B	6-3 1/2 x 4 1/2																	

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
A. & B. 3T	3	.....	5 1/2 x 4 1/2	48x3 1/2	48x3 1/2	I	Corbitt, B	2 1/2	\$3650	4 1/2 x 5 1/2	36x4	36x4d	W	Gramm, 10	1	\$1495	3 1/2 x 5	33x5 1/2	33x5 1/2	B
A. & B. 5T	5	.....	5 1/2 x 5 1/2	48x3 1/2	48x5d	I	Corbitt, A	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x10	W	Gramm, 15	1 1/2	2050	3 1/2 x 5	36x3 1/2	36x5	W
Acason, R	1	.....	3 1/2 x 3 1/2	36x3 1/2	36x5	W	Corbitt, AA	5	5500	4 1/2 x 6	36x6	40x6d	W	Gramm, 65	1 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Acason, R B	1 1/2	.....	3 1/2 x 3 1/2	36x3 1/2	36x6	W	Couple Gear, HC	3 1/2	6100	5 1/2 x 5 1/2	..	..	..	Gramm, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Acason, H	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W	Couple Gear, AC	5	6700	5 1/2 x 7	..	..	..	Gramm, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4d	W
Acason, L	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x5d	W	Couple Gear, LD	7	7450	5 1/2 x 7	..	..	..	Gramm, 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W
Acason, M	5	.....	5 x 6 1/2	36x6	40x6d	W	Dart, S	1 1/2	2250	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Gramm, 50	5	5275	4 1/2 x 6	36x6	40x6d	W
Ace, C	1 1/2	\$2750	3 1/2 x 3 1/2	34x3 1/2	34x5	W	Dart, M	2 1/2	3000	4 1/2 x 5 1/2	36x4	36x7	W	Grant, 17	1 1/2	2675	3 1/2 x 5	35x5 1/2	38x7 1/2	W
Ace, A	2 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Dart, W	3 1/2	4000	4 1/2 x 6	36x5	36x10	W	Hahn, J4	1	.....	3 1/2 x 5	36x3 1/2	36x5	W
Ace	3	3650	4 1/2 x 5 1/2	36x6	36x8	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Acme, B	1	2175	3 1/2 x 3 1/2	34x3 1/2	34x5	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Hahn, DE	2	.....	4 1/2 x 5 1/2	36x4	36x7	W
Acme, F	1 1/2	2475	3 1/2 x 3 1/2	34x3 1/2	34x5	W	Day-Elder, D	2	2750	4 1/2 x 5 1/2	36x4	36x6	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Acme, A	2	3050	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, C	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W
Acme, C	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, F	3 1/2	3700	4 1/2 x 5 1/2	36x5	36x5d	W	Hahn, EF	5 1/2	.....	4 1/2 x 6	36x6	40x12	W
Acme, E	5	5150	4 1/2 x 6	36x6	40x12	W	Day-Elder, E	5	4600	4 1/2 x 6	36x5	40x6d	W	Hal-Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Air-O-Flex, C	1 1/2	.....	3 1/2 x 3 1/2	36x3 1/2	36x5	I	Dearborn, F	1 1/2	2180	3 1/2 x 5	34x4	34x5	W	Hal-Fur, B	2	3250	4 1/2 x 5 1/2	35x5 1/2	38x7	W
All-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Dearborn, 48	2	2590	3 1/2 x 5 1/2	34x4 1/2	34x7	I	Hall	2 1/2	.....	4 1/2 x 5 1/2	36x4 1/2	36x4d	W
All-American, B-1	1	1795	3 1/2 x 3 1/2	32x4	32x4	I	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	36x6 1/2	I	Hall	3 1/2	.....	4 1/2 x 5 1/2	36x5 1/2	36x5d	W
All-American-C-1 1/2	1 1/2	2195	3 1/2 x 3 1/2	34x4	34x5	I	Defiance, E	2	2750	3 1/2 x 5	35x5 1/2	38x7 1/2	I	Hall	5	.....	4 1/2 x 5 1/2	36x5	40x6d	W
American, 40	4	4575	4 1/2 x 6	36x5	36x10	W	DeKalb, E2	2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Hall	7	.....	4 1/2 x 5 1/2	36x5	40x6d	C
Apex, C	1	1745	3 1/2 x 3 1/2	32x4 1/2	32x3 1/2	I	DeKalb, E2 1/2	2 1/2	2600	4 1/2 x 5 1/2	36x4	36x6	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Apex, D	1 1/2	1915	3 1/2 x 3 1/2	32x3 1/2	32x4	I	Denby, 12	1	2400	3 1/2 x 5	35x5	36x6	I	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Apex, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x6	I	Denby, 134	2	2800	3 1/2 x 5	36x3 1/2	36x6	I	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36x5	36x5d	W
Armleder, HW	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 25	3	3600	4 1/2 x 5 1/2	36x4	36x7	I	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6d	W
Armleder, KW	3 1/2	.....	4 1/2 x 6	36x5	36x5d	W	Denby, 27	4	4600	4 1/2 x 5 1/2	36x5	36x5d	I	Hawkeye, K	1 1/2	2365	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Armleder, 20	1	.....	3 1/2 x 3 1/2	34x3 1/2	34x5	W	Denby, 210	5	5350	4 1/2 x 5 1/2	36x6	36x6d	I	Hawkeye, M	2	2915	4 1/2 x 5 1/2	36x4	36x6	I
Atco	1 1/2	2450	3 1/2 x 3 1/2	34x5	36x6	I	Dependable, A	3 1/2	1670	3 1/2 x 5	34x5	36x6	W	Hawkeye, N	3 1/2	.....	4 1/2 x 6	38x7 1/2	44x10 1/2	I
Atco	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Dependable, C	1 1/2	2350	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Hendrickson	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Atlas, 1	1	.....	3 1/2 x 3 1/2	32x4 1/2	32x4 1/2	W	Dependable, D	2	2650	4 1/2 x 5 1/2	34x5	36x6	W	Hendrickson	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W
Atterbury, 20R	1 1/2	2775	3 1/2 x 3 1/2	34x3 1/2	34x5	W	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hendrickson	5	5400	5 x 6	36x6	40x6d	W
Atterbury, 7CX	3 1/2	3575	4 1/2 x 5 1/2	36x4	36x4d	W	Dependable, G	3 1/2	3570	4 1/2 x 6	36x6	38x7	W	Highway, A 410	4	.....	4 x 6	36x5	36x6d	W
Atterbury, 7D	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond-T, T	1 1/2	2450	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Highway, B 510	5	.....	4 x 6	36x5	40x6d	W
Atterbury, 8E	5	5975	4 1/2 x 6	36x5	40x6d	W	Diamond-T, FS	1 1/2	2715	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Higrade, A18	1	2100	3 1/2 x 5	35x5	35x5	W
Autocar, 21UF	2	2300	4 1/2 x 4 1/2	34x4	34x5	D	Diamond-T, U	2	2835	4 x 5 1/2	36x4	36x7	W	Higrade, B20	1 1/2	2500	3 1/2 x 5	34x5	36x6	W
Autocar, 21UG	2	2400	4 1/2 x 4 1/2	34x4	34x5	D	Diamond-T, K	3 1/2	3925	4 1/2 x 5 1/2	36x5	36x5d	W	Huffman, B	1 1/2	2075	3 1/2 x 5	34x3 1/2	34x6	W
Autohorse, 10	5	2100	3 1/2 x 3 1/2	34x10	.....	I	Diamond-T, EL	5	4615	4 1/2 x 5 1/2	36x6	40x6d	W	Huffman, C	1 1/2	1875	3 x 5 1/2	34x3 1/2	34x6	I
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	35x5 1/2	38x7 1/2	W	Diamond-T, S	5	4800	4 1/2 x 6	36x6	40x6d	W	Hurlburt	1 1/2	2850	4 x 5 1/2	34x4	34x5	W
Available, H2 1/2	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x8	W	Diehl, A	1	.....	3 1/2 x 5	34x4 1/2	34x5	W	Hurlburt	2 1/2	3750	4 1/2 x 5 1/2	36x4	36x4d	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x10	W	Doane	2 1/2	4100	4 1/2 x 5 1/2	36x5	36x7	C	Hurlburt	3 1/2	4400	4 1/2 x 6	36x5	36x5d	W
Available, H5	5	5575	4 1/2 x 6	36x6	40x12	W	Doane	3 1/2	5100	4 1/2 x 5 1/2	36x5	36x5d	C	Hurlburt	5	5250	4 1/2 x 6	36x5	40x6d	W
Available, H7	7	6875	5 x 6 1/2	36x6	40x14	D	Doane	3 1/2	6000	4 1/2 x 6	36x6	40x6d	C	Indep't (Iowa), E	1 1/2	2040	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Avery	1	.....	3 x 4	34x5 1/2	34x5 1/2	I	Dodge Brothers	1 1/2	1085	3 1/2 x 4 1/2	33x4	33x4	C	Indep't (Iowa), F	2	2495	3 1/2 x 5	34x4	34x6	I
Beck, A Jr.	1	1800	3 1/2 x 3 1/2	34x3 1/2	34x4	I	Dorris, K-4	2	3400	4 1/2 x 5 1/2	36x4	36x7	W	Indep't (Iowa), F	1	1885	3 1/2 x 5	34x3 1/2	34x4	W
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	I	Dorris, K-7	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x10	W	Indep't (Ohio), F	1 1/2	2770	3 1/2 x 5	36x3 1/2	36x5	W
Bell, O	2 1/2	.....	4 1/2 x 5 1/2	36x4	34x7	I	Douglas, G	1 1/2	2050	3 1/2 x 5 1/2	34x3 1/2	34x5	I	Indep't (Ohio), H	2 1/2	3520	4 1/2 x 5 1/2	36x4	36x4d	W
Bell, E	1 1/2	.....	3 1/2 x 3 1/2	35x5	36x6	I	Douglas, H	2	2560	4 1/2 x 5 1/2	34x4	36x7	I	Indep't (Ohio), K	3 1/2	4605	4 1/2 x 5 1/2	36x5	36x5d	W
Belmont, A	1 1/2	.....	3 1/2 x 3 1/2	31x4	.....	I	Douglas, I	3	3250	4 1/2 x 5 1/2	36x5	36x8	W	Indiana, 12	1 1/2	2200	3 1/2 x 5 1/2	34x3 1/2	34x5	W

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive
				Front Rear						Front Rear						Front Rear	
K-Z	1	\$2250	3 1/2 x 5	34x3 1/2 34x5	W	Parker, F20	3 1/2	\$4400	4 1/2 x 6	36x5 40x6d	W	Success, B	2 1/2	\$2850	4 1/2 x 5 1/2	34x4 36x7	W
K-Z	1 1/2	2750	3 1/2 x 5	36x4 36x6	W	Parker, M20	5	1785	3 1/2 x 5	36x6 40x6d	W	Sullivan, F	1 1/2	2350	3 1/2 x 5 1/2	36x4 36x5	W
K-Z	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x8	W	Piedmont, 4-30	2 1/2	3750	4 1/2 x 5 1/2	36x4 36x4	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4 36x7	W
K-Z	3 1/2	4250	4 1/2 x 5 1/2	36x5 40x10	W	Pier co-Arrow	3 1/2	4950	4 1/2 x 5 1/2	36x5 36x5d	W	Sullivan, H	3 1/2	4650	4 1/2 x 5 1/2	36x5 36x5 1/2	W
K-Z	5	5200	4 1/2 x 5 1/2	36x6 40x6d	W	Pier co-Arrow	5	6700	4 1/2 x 5 1/2	36x5 40x6d	W	Superior, D	1	1800	3 1/2 x 5	34x4 1/2 34x4	I
Lange, B	2	3000	4 1/2 x 5 1/2	36x4 36x6	W	Pier co-Arrow	5	6700	4 1/2 x 5 1/2	36x5 40x6d	W	Superior, E	2	2750	4 1/2 x 5 1/2	36x4 36x6	I
Larrabee, U	1 1/2	2400	3 1/2 x 5	34x3 1/2 34x5	W	Pioneer, B	1	2190	3 1/2 x 5 1/2	36x3 36x5	W	Super Truck, 50	2 1/2	.....	4 x 6	36x4 36x8	W
Larrabee, K	2 1/2	3400	4 1/2 x 5 1/2	36x4 36x7	W	Pioneer, N	1 1/2	2790	3 1/2 x 5 1/2	36x4 36x6	W	Super Truck, 70	3 1/2	.....	4 1/2 x 6	36x5 40x5d	W
Larrabee, L	3 1/2	4200	4 1/2 x 5 1/2	36x5 36x5d	W	Pioneer, F	2	3190	4 1/2 x 5 1/2	36x4 36x7	W	Super Truck, 100	5	.....	4 1/2 x 6	36x5 40x6d	W
Larrabee, W	5	5100	4 1/2 x 5 1/2	36x6 40x6d	W	Pioneer, A	3 1/2	4190	4 1/2 x 5 1/2	36x5 36x5d	W	Super Truck, 150	7 1/2	.....	5 x 6	36x6 40x7d	W
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4 36x4d	I	Pioneer, J	5	4990	4 1/2 x 5 1/2	36x6 40x6d	W	Texan, A38	3 1/2	.....	3 1/2 x 5	33x4 33x4	I
Lone Star	1 1/2	1745	3 1/2 x 5	34x4 34x5	W	Pittsburgh, B	2 1/2	320	3 1/2 x 5	34x4 34x5	W	Texan, TK39	1 1/2	.....	3 1/2 x 5	36x6 36x7	W
Lueninghaus, K-S	2	2790	4 1/2 x 5 1/2	36x4 36x7	W	Pony	1 1/2	4360	4 1/2 x 5 1/2	36x5 36x6	W	Texan, TK	1 1/2	.....	3 1/2 x 5	36x6 36x7	W
Lueninghaus, KL	2	2890	4 1/2 x 5 1/2	36x4 36x7	W	Pow, F	1 1/2	2350	3 1/2 x 5	34x4 34x5	W	Tiffin, GW	1 1/2	2695	4 1/2 x 5 1/2	36x3 1/2 36x5	W
Lueninghaus	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Pow, C	1 1/2	2150	3 1/2 x 5	34x4 34x5	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36x4 36x5 1/2	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4 36x6	W	Premcar, B 143	1 1/2	4500	4 1/2 x 5 1/2	36x5 36x5d	W	Tiffin, PW	3 1/2	4760	4 1/2 x 5 1/2	36x5 36x5d	W
Maccar, H	2 1/2	3750	4 1/2 x 5 1/2	36x4 36x4d	W	Rainier, R-11	2 1/2	2350	3 1/2 x 5	34x3 1/2 34x5	W	Tiffin, TW	5	5850	4 1/2 x 6	36x6 40x6d	W
Maccar, M-2	3 1/2	4500	4 1/2 x 5 1/2	36x5 36x5d	W	Rainier, R-15	3 1/2	2600	3 1/2 x 5	34x3 1/2 34x5	W	Tiffin, UW	6	6050	4 1/2 x 6	36x6 40x12	W
Maccar, G	5	5500	4 1/2 x 5 1/2	36x5 40x6d	W	Rainier, R-19	5	2950	4 1/2 x 5 1/2	36x5 40x6d	W	Titan, Transport	3 1/2	4550	4 1/2 x 6	36x6 40x5	I
Mack, AB	1 1/2	3150	4 x 5	36x4 36x3 1/2	D	Rainier, R-16	1 1/2	2850	4 1/2 x 5 1/2	34x4 34x6	W	Titan, S-Ten	6	5400	4 1/2 x 6	36x5 40x6d	I
Mack, AB	1 1/2	3000	4 x 5	36x4 36x3 1/2	D	Rainier, R-18	2	2675	3 1/2 x 5	34x3 1/2 34x5	W	Titan	2 1/2	3400	4 1/2 x 5 1/2	34x4 36x4	I
Mack, AB	2	3750	4 x 5	36x4 36x4d	D	Ranger, TK-20-2	2	1385	4 1/2 x 5 1/2	34x3 1/2 34x5 1/2	B	Tower, J	1 1/2	3000	4 1/2 x 5 1/2	35x5 36x7	W
Mack, AC	3 1/2	4950	5 x 6	36x5 40x5d	D	Reo, F	1 1/2	2500	4 x 5 1/2	36x3 1/2 36x5	I	Tower, H	2 1/2	3475	4 1/2 x 5 1/2	36x4 36x7	W
Mack, AC	5	5500	5 x 6	36x6 40x6d	C	Reliance, 10A	1 1/2	2825	4 x 5 1/2	36x4 36x7	I	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36x5 36x5	W
Mack, AC	6 1/2	5750	5 x 6	36x6 40x12	C	Reliance, 10B	2	3200	4 1/2 x 5 1/2	36x4 36x4d	I	Traffic, C	2	1595	3 1/2 x 5	34x3 1/2 34x5	I
Mack, AC	7 1/2	6000	5 x 6	36x7 40x7d	C	Reliance, 20B	2 1/2	3675	4 1/2 x 5 1/2	36x4 42x9	I	Transport, 20	1	1850	3 1/2 x 5	34x3 1/2 34x4	I
Mack Trac, AB	5	3400	4 x 5	36x4 36x4d	C	Republic, 10	1	1615	3 1/2 x 5	34x3 34x4	I	Transport, 30	1 1/2	2250	3 1/2 x 5	34x3 1/2 34x5	I
Mack Trac, AC	7	4950	5 x 6	36x5 40x5d	C	Republic, 11X	1 1/2	2195	3 1/2 x 5	34x3 1/2 34x5	I	Transport, 50	2 1/2	2785	4 1/2 x 5 1/2	36x4 36x7	I
Mack Trac, AC	10	5500	5 x 6	36x6 40x6d	C	Republic, 19	2 1/2	2795	4 1/2 x 5 1/2	36x4 36x7	I	Transport, 70	3 1/2	4195	4 1/2 x 6	36x5 36x10	I
Mack Trac, AC	13	5750	5 x 6	36x6 40x12	C	Republic, 20	3 1/2	3845	4 1/2 x 5 1/2	36x5 36x10	I	Traylor, B	1 1/2	2075	3 1/2 x 5 1/2	34x3 1/2 34x5	I
Mack Trac, AC	15	6000	5 x 6	36x7 40x7d	C	Riker, B	4	4600	4 1/2 x 6	36x5 36x5d	W	Traylor, C	2	2875	4 1/2 x 5 1/2	36x4 36x7	W
Master, JW	1 1/2	2690	4 1/2 x 5 1/2	34x3 1/2 34x5	W	Riker, BB	4	4700	4 1/2 x 6	36x5 36x5d	W	Traylor, D	3	3375	4 1/2 x 5 1/2	36x4 36x7	W
Master, W	2 1/2	3390	4 1/2 x 5 1/2	34x4 36x7	W	Rock Falls, 9	1 1/2	2800	3 1/2 x 5 1/2	34x3 1/2 34x5	B	Triangle, AA	1 1/2	1800	3 1/2 x 5	35x5 1/2 35x5 1/2	I
Master, D	2 1/2	3540	4 1/2 x 5 1/2	34x4 36x7	W	Rowe, CW	1 1/2	4500	4 1/2 x 6	36x5 36x5d	W	Triangle, A	1 1/2	2150	3 1/2 x 5 1/2	34x3 1/2 34x6	I
Master, A	3 1/2	4190	4 1/2 x 6	36x5 40x5d	D	Rowe, HW	4	3300	4 x 5	34x4 36x3 1/2	W	Triangle, C	2 1/2	2700	3 1/2 x 5 1/2	36x4 36x6	I
Master, B	3 1/2	4640	4 1/2 x 6	36x5 40x5d	D	Rowe, C.D.W.	2	4150	4 x 5	34x4 36x3 1/2	W	Triangle, B	2 1/2	2950	4 x 5 1/2	36x4 36x7	I
Master, B	5	5290	4 1/2 x 6 1/2	36x6 40x6d	D	Rowe, G.S.W.	3	5350	3 1/2 x 5 1/2	36x7 42x9 1/2	W	Triumph	1 1/2	2400	3 1/2 x 5 1/2	36x3 1/2 36x5	W
Master, F	5	5440	4 1/2 x 6 1/2	36x6 40x6d	D	Rowe, G.P.W.	3	5350	3 1/2 x 5 1/2	36x7 42x9 1/2	W	Triumph, HB	2	2900	3 1/2 x 5 1/2	36x4 36x7	I
Master Trac, T	6	3740	4 1/2 x 6 1/2	34x4 36x4d	D	Rowe, F.W.	5	5500	4 1/2 x 6	36x6 40x6d	W	Twin City, B	3 1/2	4750	5 1/2 x 6	36x6 36x7	I
Maxwell, 1 1/2	1 1/2	1332	3 1/2 x 1 1/2	32x3 32x4	W	Rumely	1 1/2	865	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Twin City, A	5	5250	5 1/2 x 6	36x7 36x7	I
Menominee, HT	1	2080	3 1/2 x 5	32x3 1/2 36x5	W	Samsen, 15	1 1/2	1185	3 1/2 x 5	32x4 32x4	B	Ultimate, A	2	3200	4 x 5 1/2	36x3 1/2 36x5	W
Menominee, H	1 1/2	2725	4 x 5	36x3 1/2 36x5	W	Samsen, 25	1 1/2	2195	3 1/2 x 5	32x5 32x5	B	Ultimate, AJ	2	3450	4 1/2 x 5 1/2	35x5 1/2 36x5	W
Menominee, D	2	3245	4 x 6	36x4 36x4d	W	Sandow, G	2	2575	3 1/2 x 5	34x3 1/2 34x5	B	Ultimate, B & BL	3	3750	4 1/2 x 5 1/2	36x4 36x4d	W
Menominee, G	3 1/2	4270	4 1/2 x 6	36x5 36x5d	W	Sandow, I	2	2490	3 1/2 x 5	34x3 1/2 34x5	B	Union, F	2 1/2	3150	4 x 6	36x5 36x8	I
Menominee, J	5	5450	4 1/2 x 6	36x6 40x6d	W	Sandow, CG	1 1/2	3175	3 1/2 x 5	34x3 1/2 34x5	W	Union, H	4	3975	4 1/2 x 6	36x6 36x10	I
Moline, 10	1 1/2	2250	3 1/2 x 5	34x3 1/2 36x6 1/2	W	Sandow, J	2 1/2	4095	4 1/2 x 5 1/2	36x5 36x5d	W	Union, J	6	5400	5 x 6	36x6 40x14	I
Morland, 20N	1 1/2	2850	3 1/2 x 5 1/2	36x4 36x6 1/2	W	Sandow, M	3 1/2	4775	4 1/2 x 5 1/2	36x6 40x6d	W	United, A	1 1/2	2445	3 1/2 x 5 1/2	36x3 1/2 34x5	I
Morland, 20B	1 1/2	3125	4 1/2 x 5 1/2	36x4 36x8	W	Sandow, L	5	3350	4 1/2 x 5 1/2	36x6 40x6d	W	United, B	2 1/2	3150	4 1/2 x 5 1/2	36x4 36x7	I
Morland, 20C	2 1/2	3900	4 1/2 x 5 1/2	36x4 36x8	W	Sandow, 25	2 1/2	4200	4 1/2 x 5 1/2	36x5 36x5d	W	United, C	3 1/2	3975	4 1/2 x 5 1/2	36x5 36x5 1/2	I
Morland, 20G	4	4975	4 1/2 x 6	36x5 40x5d	W	Sandow, 35	3 1/2	5100	4 1/2 x 5 1/2	36x5 40x6d	W	United, V	5	5100	4 1/2 x 6	36x6 40x6d	I
Morland, 20J	5	5350	4 1/2 x 6	36x6 40x6d	W	Sandow, 50	5	5100	4 1/2 x 5 1/2	36x5 40x6d	W	U. S. N	1 1/2	.....		

MOTOR WORLD

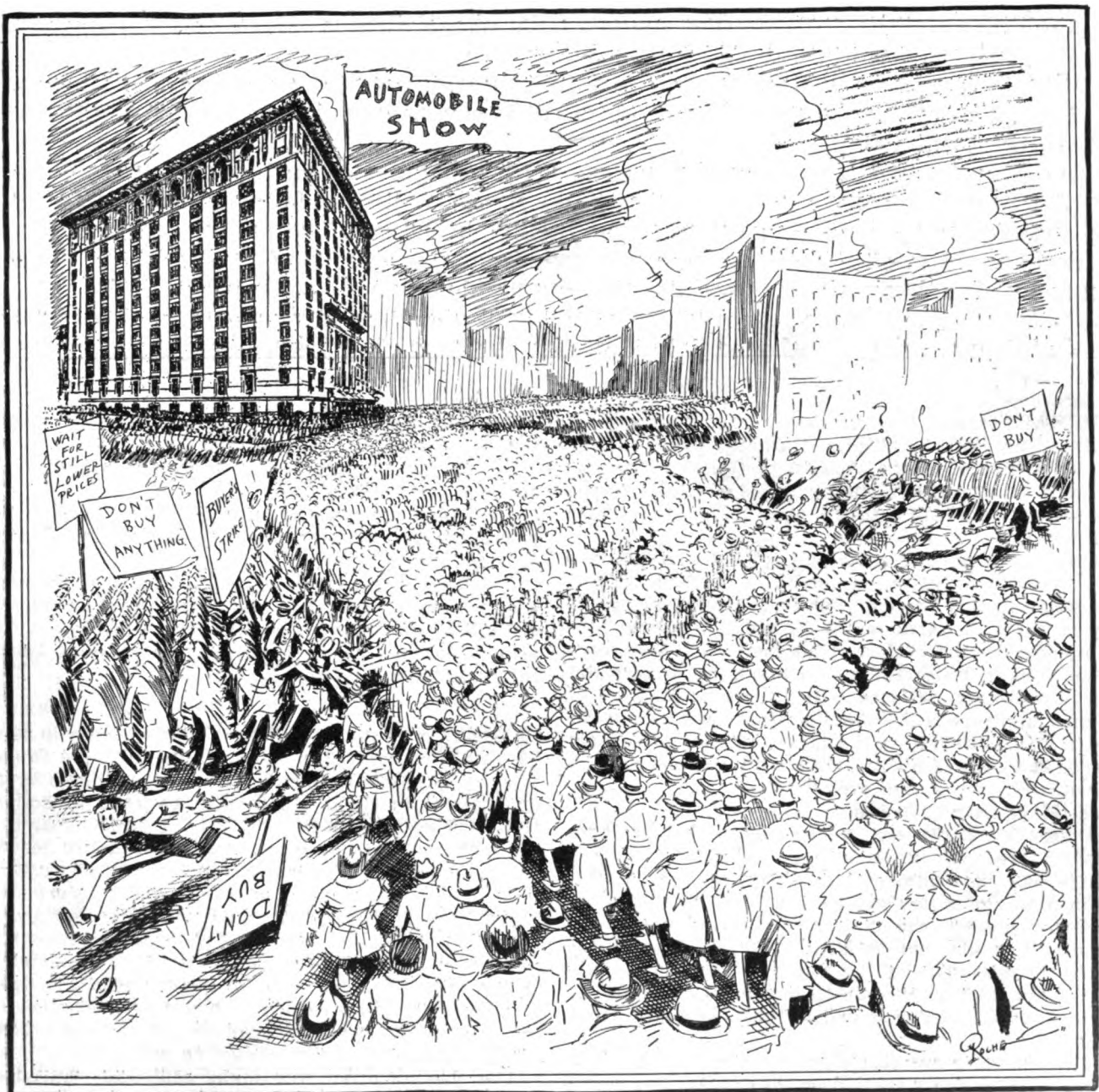
for
DEALERS, JOBBERS AND GARAGEMEN

Vol. LXVI

New York, U. S. A., Wednesday, January 19, 1921

No. 3

Another Parade Ruined



Read on pages 10 and 11 what happened in sales at the New York Show

THE DEALER'S CONTRACT

Let's Get the Industry on a Sound Foundation

By RAY W. SHERMAN

FOR years dissatisfaction has existed in the trade because of the relations between the manufacturers and the dealers. The source of the dissatisfaction is the dealer's contract and the business procedure to which it is father.

Most factory sales managers are aware that the contracts are not entirely satisfactory, but probably not all of the big men at the heads of the various companies realize the condition which exists in the trade today.

And it probably will be a surprise to some of the great men of the industry when it is stated here that there is hardly a dealer or distributor in the country today who does not feel in his heart that he isn't getting a square deal from the manufacturing end of the industry.

Perhaps the great men of the industry have believed they carried on their books the names of an army of enthusiastic and loyal dealers, and perhaps it will be a surprise to them to learn that for years there has been a growing rumbling of discontent throughout the trade, which is lessening hourly whatever of good will may exist on the part of the dealers for the factories.

PERHAPS it will be a surprise to such men as Nash, Du Pont, Chrysler, Willys, Durant, Haynes, Leland and a host of others to learn that their names are not always uttered in love and reverence when the dealers—the foundation of the industry—talk things over among themselves.

Perhaps some of these great men will ask: If all these things be true why have we not heard of them before? The answer is that there is hardly a dealer among the thirty or forty thousand in the United States who feels he can jeopardize the welfare of his family and his investment in brick and mortar by even breathing a complaint against his factory relations. To utter a single word of complaint might mean the almost instant severance of the contract, which would leave the dealer, with his investment of money and years of his life, with nothing except a building—with not even a sign over the door.

Such things have happened.

The dealer's contract has been a subject that has been avoided in the open conversations of dealers. In their meetings they have hesitated to discuss it. Time after time, in meetings of dealers, without any representatives of factories present, the subject has been almost at the point of discussion, but each time the old fear of the wrath of the sales manager has asserted itself and the subject has been submerged—buried, but not forgotten.

As to what ails contracts and methods, here are a few points:

1—*The contracts are absolutely worthless. The short-term cancellation clause takes from the contract any meaning it otherwise might have.*

2—*Schedules for shipping cars are too often arranged without regard for the conditions in the field.*

3—*The common practice of shipments without authorization is not entirely fair.*

4—*Restrictive and autocratic policies of manufacturers as regards exclusive agencies and other matters are not the best of business.*

5—*The lack of permanency in the contracts, the willingness of some sales managers to change agencies for slight, and often unjust reasons, and the general discontent cannot help in building the kind of industry we must have for future success.*

THESE are but a few points. They are many in number when all arrayed in detail. True, there are two sides to every question, but neither side has ever been brought out into the limelight and frankly discussed by both parties. The reasons seem to be that the dealers fear to and the manufacturers have not shown any desire to do so.

The manufacturer's answer, when he has any, has often been that he could not afford to tie up his future with a dealer who is not up to standard. This is true. He should not do so. In the early days of the business it was hard to find a dealer who looked permanent, and for that reason there was some basis for the manufacturer's policy. But we today have dealers who are sounder than some manufacturers, and each year the average is becoming better. *The good dealers should be protected.*

The manufacturer who signs contracts with dealers should, as a beginning, try to find good dealers. If a

Let's Talk About the Dealer's Contract at the Annual Meeting of the National Automobile Dealers Association

dealer, on the face of the proposition, is no good why sign him up at all? If he is good, why not take a chance on him with a contract that is permanent, at least to the extent of five years?

If his standing is uncertain, why not give him a temporary short-term contract with the understanding that if he makes good he can have a contract for something like five years with renewal option at a date far enough in advance of the expiration to let him know where he stands?

Today we have dealers who have spent years of their lives and thousands of dollars of their money in building a local good will for the products of manufacturers, and all this without a single element of certainty that their investment may not be rendered valueless in less than thirty days.

Is there a man in the industry who will say this is fair? Or sound? Or capable of building a big industry? Or justification for a line of credit?

We have gone through twenty years of trial and experiment in our merchandising. Today we must get set for the future. We cannot get set until we remove the discontent and give the foundation—which is the dealers—sound under-foundations.

The more progressive manufacturers are paying a great deal of attention to the elimination of discontent among the mechanics in the factories, but the dealers are not receiving the same consideration as the workmen.

There is little doubt that this great mountain that stands between the factories and the dealers is only a molehill. It has become a mountain because it has not been talked about. The one way to remove a difficulty is to have it discussed. No two sane, fair-minded men ever remained long at odds once they sat down face to face and talked with one another. And any one who knows the men in the manufacturing and selling fields knows that there never was an industry made up of bigger, fairer, brighter and keener men than is our own cherished automobile industry.

Wherefore, let's talk about it.

Very well. When?

At the annual meeting of the National Automobile Dealers Association in Chicago during the Chicago show.

A word about the National Automobile Dealers Association: It was formed to work for the trade during the war, when all sorts of shafts were aimed at the business. At the organization meeting some one endeavored to say something about factory relations, but, as stated previously, the subject was buried. The leaders in the movement said they did not believe it wise to found the association as an organization antagonistic to the manu-

facturers. These leaders, whose counsel prevailed, said they believed the trade's many problems could best be handled by co-operation and counsel rather than by fighting the factories.

They were right, and many little things have been settled, but the big thing has not been settled, because to many it has seemed that any mention of it would savor of antagonism. This opinion is not as sound as it might be, because an effort to do a thing which will assure the industry a sound future is right co-operation.

The alteration of the contract and the installation of permanency cannot lessen the production of the factories. No factory can make more cars than it can sell, contract or no contract, and no sales manager is a good sales manager who believes he is building a future for his factory when he clips off one dealer and gives the contract to another who will "promise" to take a few more cars. This has been done, and is being attempted to-day, and the men who have invested their millions in factories should investigate their sales managers as to the soundness of their methods. Let them ask not about what the sales manager sees for 1921 but what he plans for 1925 and what he is doing to assure himself of intelligent, loyal, soundly financed and prosperous dealers five years from now.

A dealer who does not make money is of absolutely no permanent value to any factory. Dealers who take many cars in 1921, and lose money, are not an asset. Dealers who take fewer cars in 1921 but who make money will be here in 1925 and taking a great many cars, if economic conditions do not prevent.

Books might be written on the subject. Volumes can be said. But the first step is to drag the much feared specter out into the light of day and TALK about it. This can well be done at the N. A. D. A. convention. It SHOULD be done. It MUST be done—and there's no use waiting another year to begin.

Until the dealers and makers get together and become more of a unity in business, instead of two mistrustful factions, we cannot have an industry which merits the confidence of the public, of business, and of the bankers.

During the last year we have lamented the condemnation of us by business generally because of the easy way in which contracts for parts, materials, cars and everything else have been broken. And why shouldn't they be broken? The entire industry is founded on loose and meaningless contractual relations, and that ethics and morals failed to stand the strain is not surprising.

Let's make our business a real MAN.

Let's talk about it—

At the N. A. D. A. meeting.

Encouraging Record of Sales Made at the New York Show

**Volume Within 50 to 75 Per Cent of Last Year's in Face
of Reversal to Buyer's Market—Plenty of Evidence That
Shows, Supported and Followed by Aggressive Selling,
Will Speed Return of Buying Now Under Way.**

THE automobile industry took off its coat and rolled up its sleeves and smiled *and worked* in New York this week—and *it sold automobiles*.

Retail sales on the floor of the New York Show ran between 50 and 75 per cent of those made in 1920 and in the main well up toward the average of several years past, except 1919. That year show selling was phenomenal, with cars presented in an exposition for the first time since the armistice and with the metropolitan dealers conducting a real dealers' show as contrasted with the national shows of the National Automobile Chamber of Commerce.

In summary, it may be said that show sales of the higher priced cars—above \$3000—ran about 50 per cent below those of last year. Sales in the \$1500 to \$3000 class aggregated about 75 per cent of 1920 and those in the class below \$1500 a little less than 75 per cent.

THE show has not put buying back on a normal basis. No one expected it would. But it has broken the apathy of the metropolitan buying public, and with an attendance even greater than that of last year it has put new spirit into the organizations selling automobiles in New York and the entire Eastern territory.

Here is the kernel of the story: *Not a single New York distributor or branch manager went into the show with any idea that results would come anywhere near those of previous years. They were optimistic—the show radiated cheer in every nook and corner—but down in their hearts the sales executives realized that they were facing a buying public with the reins in its own instead of the sellers' hands, with its purchasing power materially depreciated and with its thoughts turned away from buying, and they were prepared to be encouraged if actual sales amounted to a quarter of the average at a New York show.* WHAT HAPPENED IS ACCEPTED BOTH BY MANUFACTURING AND MERCHANDISING EXECUTIVES WHO HAVE BEEN IN CONFERENCE THROUGHOUT THE WEEK AS EVIDENCE THAT THE TIDE HAS TURNED, THAT BUYERS ARE BACK IN THE MARKET, AND THAT A RISING CURVE OF SALES MAY BE EXPECTED AS WINTER PROGRESSES AND SPRING COMES ON.

No one can say what will be the after-effect of the show. There is a possibility, but not much probability, that sales may recede toward the near stagnation which prevailed as the old year passed out.

The logical assumption is that with prospect lists obtained at the show, which are far better than those of previous years in size and quality, the metropolitan and suburban dealers, by hard work, will be able to turn some of the thousands of show inquiries into cash and do considerable business between now and the opening of the spring season.

Quality in the show crowds was a notable feature of the 1921 exposition. With fewer complimentary tickets issued, the attendance was not far behind that of last year, and there were fewer idle spectators. A good many people who came to the show last year just to look upon a spectacle seemed to have other uses this week for the 75 cents demanded at the gate. There was less milling around the aisles and there were more people inside the exhibits. There were more interviews by salesmen, who were at a loss in some cases to say why people should have been more willing than formerly to give their names for prospect lists. When the phenomenon was reported to the dealers there was general agreement that many people were getting to the point, after long holding off, where the need or desire to own an automobile or replace one already in use was so strong that they were ready to talk business. In fact, the percentage of prospects giving a definite date when they expected to buy was unusually high. One exhibitor who checked up the prospect list obtained at the show found on it 400 names that were not on his pre-show lists.

One striking point in observation of the show was the work of the men in the exhibits. There was

some poor salesmanship, some attempts by men who could not talk intelligently about their product to meet people who had owned and driven cars for years. But this sort of thing did not get far. *Poorly manned exhibits were poorly patronized—quite a few of them reported not a single sale—but the exhibits with well-informed, hard-working staffs reaped the rewards of efficient effort.* One car in the lower priced class, which formerly had little real competition, made a record of fourteen sales—not much of a record in comparison with eighty-two at another show when the competitive cars were just coming into production and yet had to make their name. But only two or three exhibits claimed more than fourteen sales, and in this exhibit, with its fourteen sales, the staff had to work hard and intelligently to make even that many. The dealer in charge said that at the show and before the show his men had put in on every contract the effort that used to close ten, which may be accepted as an indication of the sort of selling that must prevail in the trade from now on.

Show Wholesale and Retail Success

The show brought to New York, for conference with factory and distributor executives, a large number of dealers. It was decidedly a success as a wholesale show. Dealers who came from far and near and who saw thousands upon thousands of people paying 75 cents to inspect the products of the industry, and hundreds upon hundreds taking the time to question salesmen, found their faith in the future—the immediate future—of the business materially strengthened. The result was a general placing of orders for shipments of cars from the factories, not in sufficient volume to make possible anything like normal production, but numerous enough to give manufacturers substantial encouragement in their plan of gradually building up output to meet the spring demand. Several distributors, particularly those of cars which brought out new models which dealers stocked in considerable quantity in the late fall, found these stocks still existent in part, and no attempts were made to add to the dealers' burdens. There was a general disposition of the manufacturer and distributor to meet the dealer's needs about as he stated them, which means that production from now on will be held pretty closely to apparent demand.

The New York show squelched all the rumors that the public had turned against the automobile and that the

in the life of a great city had passed. Afternoon and evening, from the first to the final Saturday of the show, the crowds were tremendous, and the exhibits in the hotels were well patronized too. The newspapers gave the

The Story Behind the Story of Sales at the New York Show

WHEN a staff of Motor World editors started out to canvass the show sales situation they made it plain to manufacturer and distributor executives with whom they talked that nobody was to be quoted and no figures were to be used. This was to avoid getting optimistic claims instead of statements of fact. The men interviewed were in virtually all cases personally known to the interviewers, and it is believed that the summary of sales accomplishments, surprising as it is to some who looked for little real stimulation from the show, is based on unvarnished truth—that it is a true picture of results obtained by the eighty odd passenger-car exhibitors.

What happened in New York is full of meaning for the trade of the whole country, facing conditions which have never been paralleled in the experience of many dealers who have recently come into the business. What happened in New York means that dealer associations and show managers the country over can go forward with show plans, confident that what they get out of the shows will be worth all the effort put into them—and the more effort, well directed, the better. What happened in New York shows that the "good old days," when selling a car was as easy as slipping out of a silk lined overcoat are gone.

You will be interested in reading that some exhibitors sold many more cars at the show than others—and why.

day of the motor car show as an *event* show more than "publicity"—the better ones studied it both from engineering and merchandising viewpoints, and printed some informative and helpful stories.

The attendance far exceeded the most sanguine expectations. The opening Saturday and Friday, when there was an all day rain, brought poor crowds but the average attendance of the other five days was only 10 per cent below last year's. On Thursday the crowd was within 500

of the record for a single day's attendance at any New York show.

Out of the show the New York dealers and the suburban men who brought in prospects—and sold some of them—have learned anew the lesson that only selling will sell under present conditions. The accomplishments of several sales staffs offered a revelation of what real merchandising will do, and the "fall down" of some others, where the old waiting methods were followed, was pitiful.

There was an inspiration, too, in the businesslike indexing of prospects in some of the exhibits, a work which a look behind the scenes disclosed was being hooked up with the activities of the office and salesroom staffs of the dealers concerned. Even with the show drawing big afternoon crowds there was much shopping on Broadway during the week. One salesroom in particular was crowded with prospects on two afternoons, most of them having gone there from the show or having been brought in by salesmen who had called on them almost before the ink had dried on the prospect lists they had fattened at the Palace.

The trade in New York, in fact, the entire industry, got out of the show well founded indications of a return of buying and plenty of encouragement to believe that the shows, supported and followed by selling, by hard work, will speed the return.

Eastern Jobbers See Early Trade Return

NEW YORK, Jan. 13.

An early return of volume buying of automotive equipment was indicated at the annual meeting here during show week of the Eastern Automotive Equipment Association. Jobbers present reported dealers and garagemen beginning to place orders to fill almost empty shelves and bins. The feeling was that while increase in trade would be gradual it would be steady from now on, enabling manufacturers to resume or speed up production.

The jobbers discussed plans of building up sales of accessories by educating dealers in the opportunities in this line of merchandising. Along this line suggestions were made by Walter P. Coghlan, general sales manager of the American Hammered Piston Ring Co., and Ray W. Sherman, executive editor of the Class Journal papers. A letter from G. Norman Baughman of the G. Norman Baughman Co., Tampa, Fla., jobber, also contributed to the discussion.

The officers of 1920 were re-elected, as follows: President, George B. Shearer, Jr., Gaul, Derr & Shearer Co., Philadelphia; vice-president, Wallace G. Page, American Motor Equipment Co., Boston; secretary, R. A. Picard, A. J. Picard & Co., New York; treasurer, Bernard Miller, Economy Auto Supply Co., New York.

New York Show Reveals

Makers Giving More Thought to Refinement of Body Design

Comfort and Convenience Enhanced in Coach Work on 1921 Models—"Extras" Now Made Regular Equipment

THE effort on the part of the manufacturer to cater to the public demand for better conveniences and also to place before the public many things in the way of extras as regular equipment makes this 1921 show stand out as perhaps no show has stood out since the adoption of electric starting and lighting systems in 1911 and 1912.

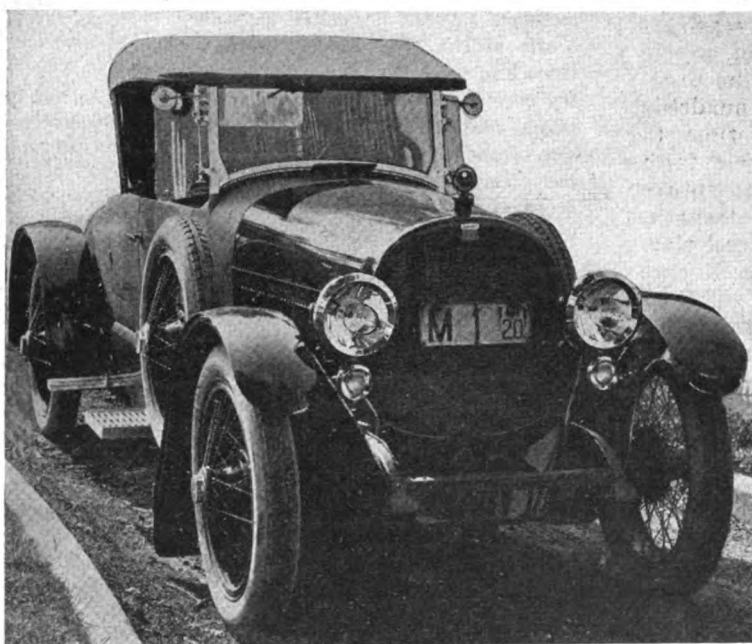
THE inclosed models have not only increased greatly in number but the appointments have been made better. Among the interesting features of the coupes and sedans is the almost universal use of a small crank on the door to lower or raise the glass sash, the sash stopping at any point desired by simply stopping the turning of the crank. There are several different manufacturers making this kind of equipment and the mechanical methods of obtaining the results vary, but they all operate with cranks on the inside of the door. Some cars had devices to conceal the crank.

Windshield construction has been varied this year in many cases. There is one type which uses a double arrangement of glasses and is known as the vacuum type, the idea being that the air currents automatically keep the windshield from accumulating water and snow. Another car, the Mitchell, has a V-type windshield, and while this part of it is not new, the adaptation of an extra upper leaf on the driver's side only is a novelty.

Individual steps are replacing running-boards on many of the medium and higher price cars and the treat-

ment of the nearby parts of the car is interesting. To simply replace the running-boards with steps and let the other parts go would be crude and would produce effects not at all desirable. The mudguards would be detached and would seem to have no logical ending place. In order to get

Haynes with Windshield Wings



Windshield wings, double rear mirrors, individual steps and a one-piece windshield on the Haynes 47 speedster


around this effect, several constructions have been employed. On the H. C. S., the front fender fades into the curve of the spare wheel which is mounted beside the bonnet. This con-

ceals the termination of the front mudguard and gives a pleasing appearance. At the rear, the front of the mudguard is attached to the rear of the individual step and the open effect is between the two steps.

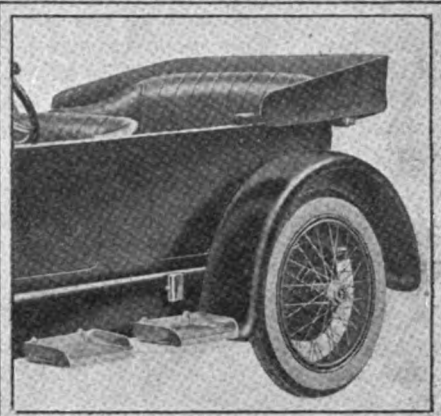
There is little of the radical in the changes in the open cars. The tops have been noticeably improved in construction and there is a tendency toward the California top either in its true form or with variations. Some of these tops simply consist of a permanent top with plate glass in the rear quarter, while others have glass in the rear but not the front. Of the types enclosing the whole car, there are two, one in which the glasses slide up and down in the doors as shown on the Skelton and one in which the glasses open with the doors as shown on the Stephens. In many of the roadsters and touring cars the space between the bow and the rear deck is filled in with imitation leather. This has been seen before but not to such a great extent as now.

Outside handles and levers are coming into their own again this year. With the practical elimination of all outside fittings a year or so ago, the handles, brakes, and gear-shift levers, lamps and everything

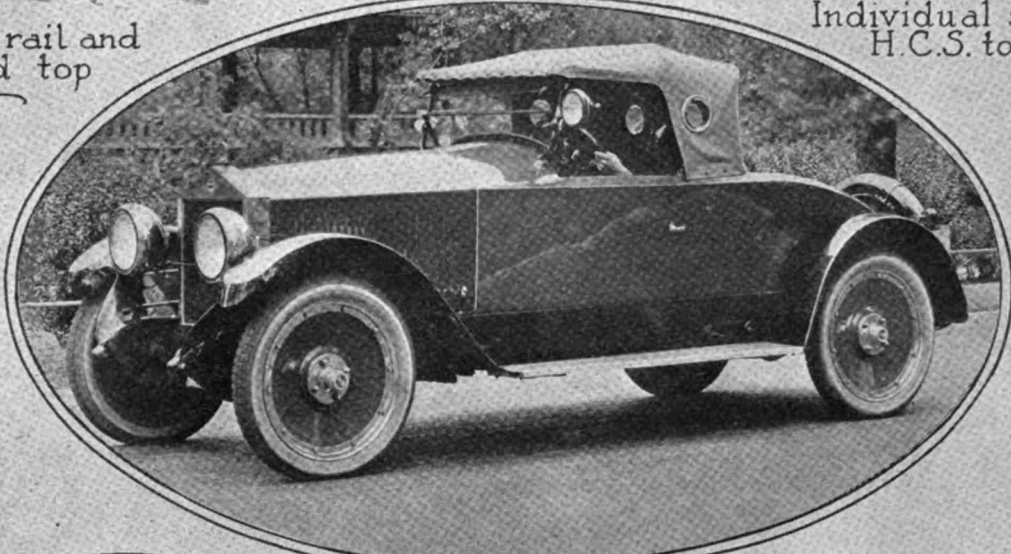
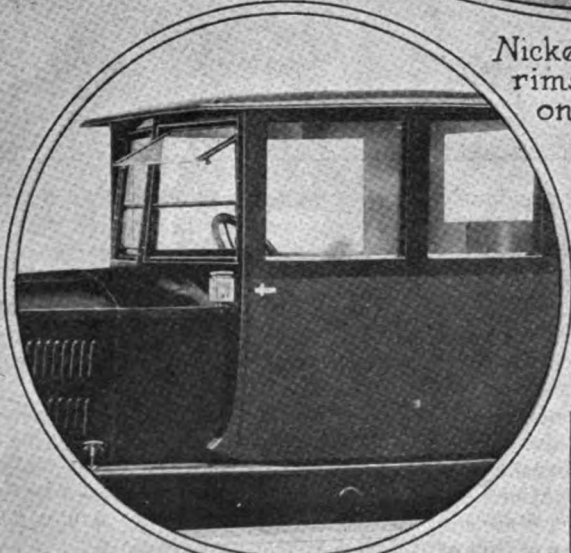
Body Refinements at the New York Show



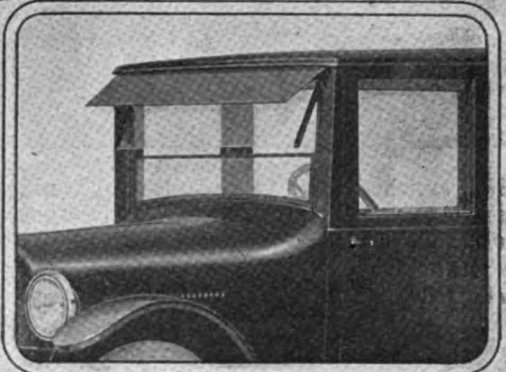
Moulded rail and improved top on Dort



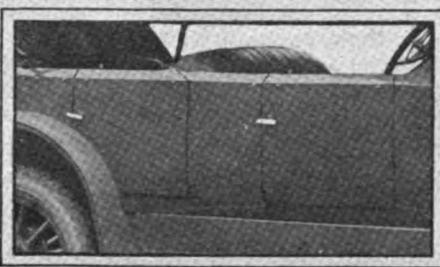
Individual steps on the H.C.S. touring car

Nickel radiator, tire rims, hubs and lamps on Moon 6-48.



Sunshade as part of the equipment of the Flupmobile



V-type windshield and individual rain visor in front of driver on Mitchell

Exterior door handles are coming back on the open models

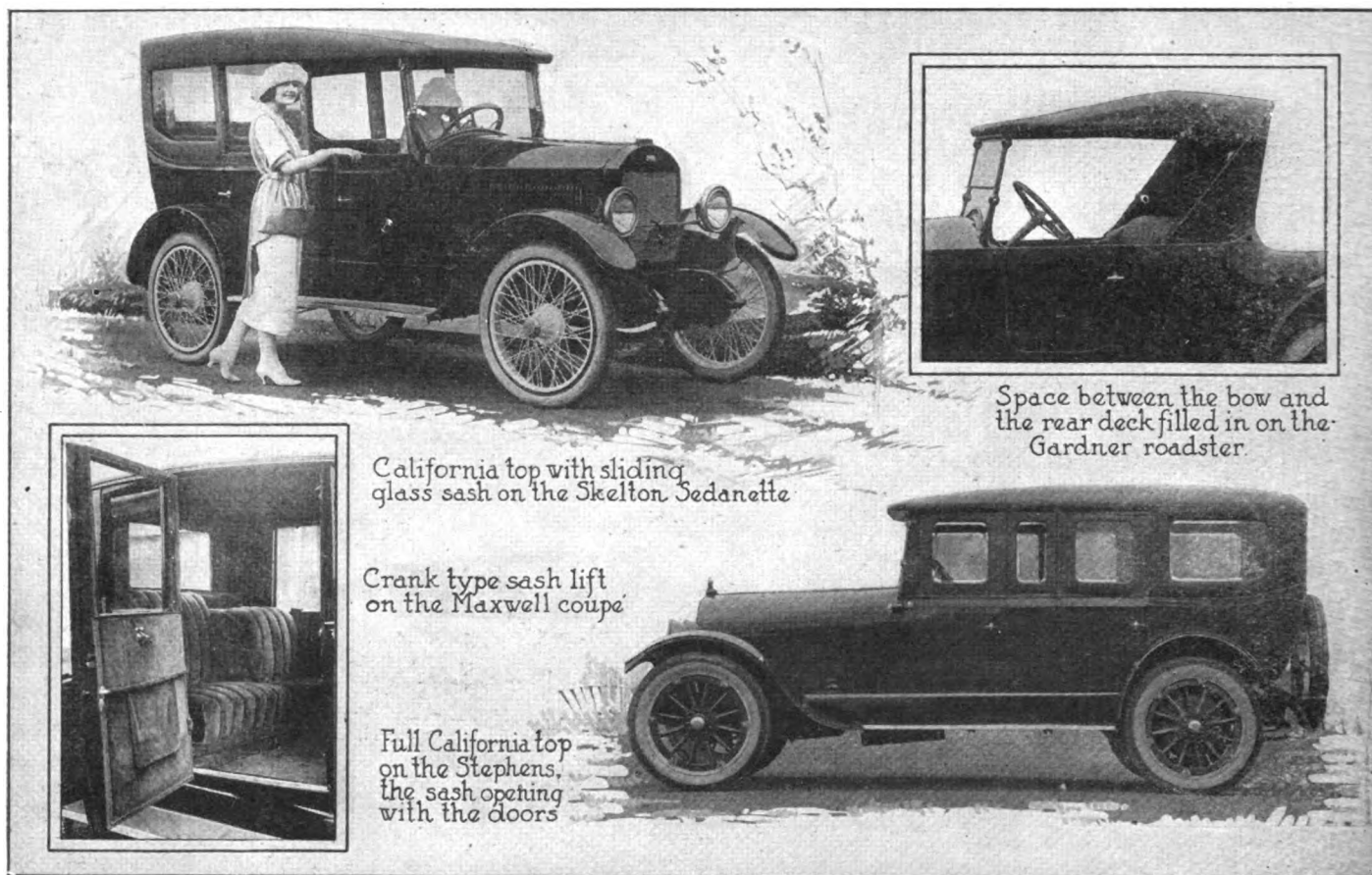
were stripped and either combined with other parts or placed inside the body. This did away with all the brass and nickel work outside the car and everything bright was enameled black. The placing of the door handles inside has been a great inconvenience to the owner in spite of its better looks because of the difficulty in opening the doors from the outside with the curtains in place. This inconvenience is now being done away with. To offset the effect of shiny hardware many of the handles are inlaid with ebony or walnut, leaving only the tips bright.

not been as carefully worked out as it will be later. Of the many colors and designs seen, the best effect seemed to be produced when the disks were painted the same color as the body, but a shade or two lighter. The painting of rings on some of the disks produced too much the effect of a target in a shooting gallery. There are too many circles on the wheels already and the addition of more does not improve things. With all the disk wheels in such varieties, the wood wheels to which we have been accustomed so long seemed to take on an air of dig-

The rigid straight lines so popular for the past few seasons have been modified in many cases and the use of curves and angles gives the enclosed cars a better appearance. The abrupt fronts have been softened by slanting the windshields and on the open cars the windshield wings also give a decidedly natty appearance.

While the cars for 1921 show no radical changes in frame construction there has been some effort put forth by the makers to stiffen their present designs. The frame joints are better made and there is a generous use of

California Tops and Crank Sash Lifts Popular



California top with sliding glass sash on the Skelton Sedanette

Space between the bow and the rear deck filled in on the Gardner roadster

Crank type sash lift on the Maxwell coupe

Full California top on the Stephens, the sash opening with the doors

The sunshade for the windshield, featured previously as an accessory, is now standard equipment on many of the cars and will probably see a great increase during the year because it is really serviceable and makes the driving of the car less difficult on account of blinding sun and rays from headlamps.

Nickeling is being carried out to the radiators, lamps, windshields and even in some cases to the tire rims and hubs. Several show models had disk wheels in nickel but these are not standard equipment and it is doubtful whether they will ever come into general use because of the work necessary in keeping them in proper condition. The painting of the disk wheels has

nity that they did not previously possess.

Plate glass is being almost universally used in the rear decks of the open cars, and in the higher price classes this is generally beveled. The use of celluloid is being confined to curtains, where as yet plate glass has not been used on account of the impossibility of folding and also on account of the possibility of breakage.

The brighter color combinations are a distinct move in the right direction and the fact that there is the option of several colors without any increase in price shows a tendency to bow to the wishes of the prospect. This is not universal practice as yet, but seems to be coming along nicely.

gusset plates. There are more rivets used in some of the frames than formerly and in many instances the frames have a slightly deeper section. Most of the makers now use a leather packing between the frame and the sills of the body and between fenders and body to eliminate squeaks.

Upholstery looks and is much neater on this year's cars. While it is true we formerly used good materials for upholstery the fact remains that the edges usually presented a rather unfinished look. In the last year or so there has appeared a binding material which the maker can buy and which is vastly superior to the old hand-made variety. It is of thicker material and held by invisible tacks.

The Way to Get There—

By RAY W. SHERMAN

BEN DOYNO, livest of Callawassa's supplymen, cast a dilapidated snipe into the fire and before it hit had bitten the end of a fresh one. Every man has his one best trick—and this was Ben's. The thud of the snipe on the logs caused a little flare, which sent vague flickerings over the ceiling of the club-rooms of the Callawassa Motor Trade Association.

Ben was a jobber. He admitted it—as did most of the manufacturers. He had a pretty good retail store, which he still kept despite the claims of some of his friends that he should join the famous "wholesale-only" parade, which was gathering numbers in the jobbing trade.

"Well," jibed Reilly, who scattered Sennetts in and about Callawassa, "how can you be a jobber if you're a retailer?"

"Rot!" snorted Ben. "How can you be a dealer if you're also a distributor?"

There not being any answer, none was made.

"I'll tell you what's the trouble with the whole business," Ben declared. "It's this: The sale of accessories, supplies, equipment and all the rest of the stuff hasn't been developed yet into a real trade. When it is, there won't be any excuse for me running a retail store. But if I close the retail store who's going to handle the business? Some of it will go to the garages and dealers, some of it to the hardware and drug men, some of it to the department stores, and some of it **WON'T BE HANDLED AT ALL.** That's my answer for my retail store."

"Sounds reasonable," said Reilly, poking the fire with a poker which kept losing its handle.

"And what's more," Ben continued, "the thing will never be worked out until the jobbers get behind some intelligent movement, collectively or individually, and make a real retail business for the disposal of automotive equipment. To-day most of us are sitting around wondering why we don't get more support from the dealer. Some of us even go so far as to bawl him out and try to sell him on what good friends of his we are and how essential we are to his well-being. As a matter of fact, we haven't yet begun to do for him what we can do. One reason is that we aren't sold on our duty to him along development lines, and the second reason is we haven't the right idea as to how to go at it.

"Take for example, Bill Bott's garage out in the Third ward. Bill has a good

location, some good trade and a wonderful chance to develop a good retail accessory business. I presume a half dozen jobbing salesmen call on him every week.

"Probably not one of these men takes an extra three minutes to see if a good seed can't be sown for the development of business. The salesman doesn't approach the educational thing from the right angle because he isn't looking at his business from the right angle, and the reason he isn't looking at it from the right angle is because the jobbing sales manager hasn't taught him the right angle. And the reason the jobbing sales manager hasn't the right angle is that the head of the company hasn't paid enough attention to the business and **MADE** the sales manager **SEE** the right angle.

"The jobbing salesman thinks in terms of orders in his book instead of in terms of business development. That's the trouble with all of us. We have our noses so close to our own businesses that we can't see anything else. All we can see is to-day's orders. We don't look far enough ahead to wonder what the volume of business will be a couple of years from now and who will be selling the goods.

"But now—supposing a jobbing salesman, when he called on Bill tomorrow, would say: 'Bill, I'm making a bit of an investigation, and I'd like to know how much net profit you made on accessories last year.' Old Bill would scratch his head and say he couldn't tell—for he **CAN'T.** And then, supposing the next salesman who came along asked Bill the same thing. It would make him think.

"Then, supposing the next time these salesmen made their round they would all ask Bill what class of articles made him the most profit. And the next time they'd ask him how many times he turned his accessory stock. And the next time if he had heard about the man in Bushville who made five thousand net last year on accessories. And the next time something else. And then finally get around to asking him if he would be interested in knowing something about how much an accessory department

could earn for him. And keep leading up to the big subject of putting in an accessory department and **MAKING IT PAY.**

"All these questions would start Bill thinking—which is half the battle—for the trouble with him to-day is that he doesn't even think about accessories—and neither does the salesman. It would make the salesman think, too—which would help a great deal.

"And then, when you'd got Bill to the point where he would put in an accessory department, he should be brought into a jobbing house, or have a teacher go to him and show him how to **MOVE THE GOODS.** We all have big ideas about how Bill should buy, but we're not much help to him in selling what he's bought.

"For example: We should go through the motions of selling an imaginary customer an article. Show Bill when is a good time to make the effort, how to get the device into the customer's hands, what to say and how to say it, and how to hold his mouth so he can close the sale and get the money. It's no use telling Bill to **SELL.** We've got to show him **HOW** to sell. We must furnish the example.

"As time goes on we must develop this accessory business, Reilly. The jobbers' association set out once upon a time to do some good work, but when it got its nose back close to its own business again and hasn't seen much in the way of business development since. Business development is one of the biggest things it can do. It has gone "wholesale-only" in an effort to help the dealers, which is like building a school-house and not furnishing any teacher. "Wholesale-only" is all right, Reilly, but it's not enough. We've got to get some **PLUS** into it."

"Looks to me," said Reilly, "as though you were sitting on one side of the room looking at an empty chair on the other side and wondering how to get across."

"That's it. We are!"

"Well," Reilly answered, "had it ever occurred to you that one way to get any place is to get up and get there?"



Editorial Observation

Something About Empty Shelves

IN these days when the world is talking of service as the basis for business growth and profits it is well to bear in mind that the man who deals exclusively in merchandise has primarily only one kind of service to offer—goods to meet the demands of his trade. If he is continually “out” of this and “out” of that he is not giving service and he will neither grow nor profit.

The all but empty shelves of some dealers and garagemen, these days, are their chief liability. Community good will, built by years of effort, will go aglimmering in short order when the pre-spring buying season opens unless such dealers fill the gaps in their stocks. A slight resumption in jobbers' business since the holidays indicates that some dealers are aware of the situation which they face. Dealers who are still holding off in placing orders can be convinced by jobbers and jobber salesmen that further holding off will be decidedly damaging, if not disastrous to their patronage.

In fact, leading the dealer and garageman back into the buying column is the big task ahead of the jobber just now. Intelligent effort along this line, with special attention to enlightenment of the dealer regarding the profits in accessory merchandising, will accomplish much for the industry all along the line

from the manufacturer to the retailer. It will start factory wheels turning again at normal speed, it will put jobbers' revenues back on a basis necessary to take care of overhead and provide profit and it will get the retailer back in the position where he can serve his trade as it expects to be served, as it must be served if the dealer and garageman are going to remain profitably in business and do their part in building for the industry the stable future that is just as much to their advantage as the manufacturer's or the wholesaler's.

In any well-managed business the percentage of overhead cost decreases with increase in volume of sales. And overhead rises when volume declines. Loss of a few sales or a few repair jobs a week, because the dealer or garageman is “out” of something, means loss of profit, not only on the sales and jobs involved but in the entire business.

It is time to buy, not blindly, just for the sake of buying, but to meet the inevitable demands of reviving business.

You can sell only that you have to sell.

You can profit only when you sell.

Empty shelves and empty bins mean—

LOSS.

It is time to buy.

Shows and the Newspapers

ONE thing that the automobile shows do is to get publicity for the automobile. This year in New York the show brought out a sizable—far too sizable—crop of “publicity” which properly has quotation marks around it but it placed before the buying public also much information and comment of decided value to the industry.

The New York *Tribune*, for instance, commenting editorially on buying at the show, went on to discuss the position of the automobile in the life of the country, as follows:

The truth is that the conception of a motor car as a luxury still clings to popular thought—even hangs on in the motor world despite the facts and publicity to counteract it. There are obviously motor cars which are sheer luxury. They are the conspicuous cars, too, and it is natural that an exaggerated notion of their importance to the industry should persist. But every such car could be wiped out of existence, as a manufacturing factor, without destroy-

ing more than 1 or 2 per cent of the motor car business of the country. The great mass of American family automobiles earn their way as delivery wagons and hacks, with only an incidental service as pleasure vehicles, in just about the same ratio as the oldtime farmer's horse that every so often carried the household to church or a picnic.

Sane treatment of the industry like this in newspaper columns, with what amounts to advice to people needing automobiles to buy them, is decidedly helpful. Let's hope the day may come when automobile “sections” at show time will be filled with real information rather than with puffery, which does little more than get the names and pictures of manufacturing executives into the papers. In the factory publicity departments and in the newspaper offices there is need of reform, and a lot of it, in the preparation of automobile news copy at show time and throughout the year.

When are we going to start?

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

What About the Jobber? Is He Cutting a Swath or Just Filling a Niche?

Here's another automotive equipment manufacturer who has some definite thoughts about relations with jobbers.

Editor Motor World:—We certainly want to compliment you on the stand you have taken in the January 5 issue of Motor World, which has just come to hand, in the article entitled "Is the Jobber Cutting a Swath or Just Filling a Niche?"

In this article you have certainly hit one of the vital nails of the automotive equipment industry on the head. There is no doubt but that the jobber is the first to reap profits when business is good, but he is the first to "tuck his tail and run" when business gets slack.

In the last few months jobbers have not only canceled orders promiscuously and with utter disregard to the manufacturer, but they have actually loaded their stock on hand on the train and shipped it back to the manufacturer, and demanded credit. If they owed an account they could not but accept their proposition; if they didn't owe an account they declared unless the goods were accepted that they would never place another order with that particular manufacturer.

Not only has the jobber returned goods, canceled orders, but if he was very far from the factory, and the dealer order was of any volume, he refused to accept it because it would tie up some of his money for a few days, and he would not want to take the risk.

The last four months has certainly called to the manufacturer's attention these facts in a way that he cannot forget very soon—that under present methods of operation, and under present policies the jobber is a parasite, and unless he is ready and willing to shoulder a part of the responsibility he must certainly be eliminated from the industry.

We believe that your paper is in a position to help remedy this condition

and are mighty glad to see you publish your plain talk of Jan. 5.

Wishes to Get Better Acquainted

The "Back to Selling" stories in past issues of Motor World have made a big hit. In this letter, Benjamin C. Mott, sales manager Packard Motor Car Co., Chicago, says some nice things about them and Motor World.

Did You?

DID you tackle that trouble that came your way,
With a resolute heart and cheerful;
Or, hide your face from the light of day,
With a craven soul and fearful?

Oh, a trouble's a ton or a trouble's an ounce,
Or, trouble is what you make it;
And it isn't the fact that you're hurt that counts,
But only, how did you take it?

You are beaten to earth? Well, well, what's that?
Come up with a smiling face;
It's nothing against you to fall down flat,
But to lie there—that's disgrace.

The harder you're thrown, why the higher you bounce,
Be proud of your blackened eye!
It isn't the fact that you're licked that counts,
It's how did you fight—and why?

And tho' you be done to the death—what then?
If you battled the best you could,
If you played your part in the world of men,
Why, the critic will call it good.

Death comes with a crawl, or comes with a pounce,
And whether he's slow or spry,
It isn't the fact that you're dead that counts,
But only—how did you die?—Edmund Vance Cooke.

Editor Motor World: The writer has been a reader of Motor World for a number of years, and merely wishes to take this opportunity to state that it is his candid belief that no trade paper published covering the automobile business compares in the least with Motor World—hence our desire to have our organization become more familiar with it.

The writer further notes that there were several apparently good stories on "Back to Selling." I wonder whether it would be possible for us to obtain the back issues which carried this series of articles?

How One Firm Is Building for the Future

The G. Norman Baughman firm, automotive jobbers in Florida, is spending one-third of its net profits each year to promote automotive interests.

Editor Motor World: We are here for service, and when I tell you we spend one-third of our net profit of the previous year for the next year's advertising and education of the automotive industry in the State of Florida, you will realize we mean just exactly what we are writing about. I do not know if there is another jobbing house in the United States that spends as much of its profits for purposes as we do. We are down here, far away from the usual line of endeavor. We do not get the opportunity of visits from factory men like the Northern places do. We have the long haul and high freight rate, small towns, small garages and many disadvantages not known to our Northern neighbors; furthermore, the State of Florida is a new State in the industry, and it takes work to build a solid foundation.

We have just held the first annual meeting of the Florida Automobile Dealers Association, in this city, and it has done wonders. It has brought together a great many automobile people who did not heretofore know what co-operation meant.

G. Norman Baughman.

Thanks

Editor Motor World: I have often read your Motor World and find it to be very instructive.—R. M. Barkdoll, W. E. Dinneen Garage, Cheyenne, Wyo.

Back to Selling Idea Pleases

Editor Motor World: May we not compliment you on the good work you are doing in selling the idea of getting back to real salesmanship to your readers.

This is what is needed to start the wheels of industry to moving. More power to you.—The Lakewood Engineering Co., Cleveland.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Ramp Interferes with Efficient Layout Operating Economy Favors It

*Elevator Is Less Wasteful of Space—Difficult to Fit Ramp
into Three-story Building*

HOW seriously a ramp interferes with the efficient arrangement of the cars in storage is strikingly illustrated in the plan on the opposite page. Normally the cars would be stored in rows parallel to the longer dimension. If this arrangement were adopted in this building it would result in rather sharp turns off the ramp into the aisles. For instance, cars stored in the front of the building on the second floor would have to make a turn of very short radius, if the cars are stored in rows facing a center aisle. Perhaps such an arrangement would work out to be preferable to the one shown.

The elevator has the advantage of space economy and minimum interference with the interior layout of the building. On the other hand the cost of operation, which includes the salary of an operator, is also to be considered. The ramp can seldom be fitted into a building of more than two stories without getting into complications affecting interior layout. It occupies more space than the elevator, and due to its influence

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

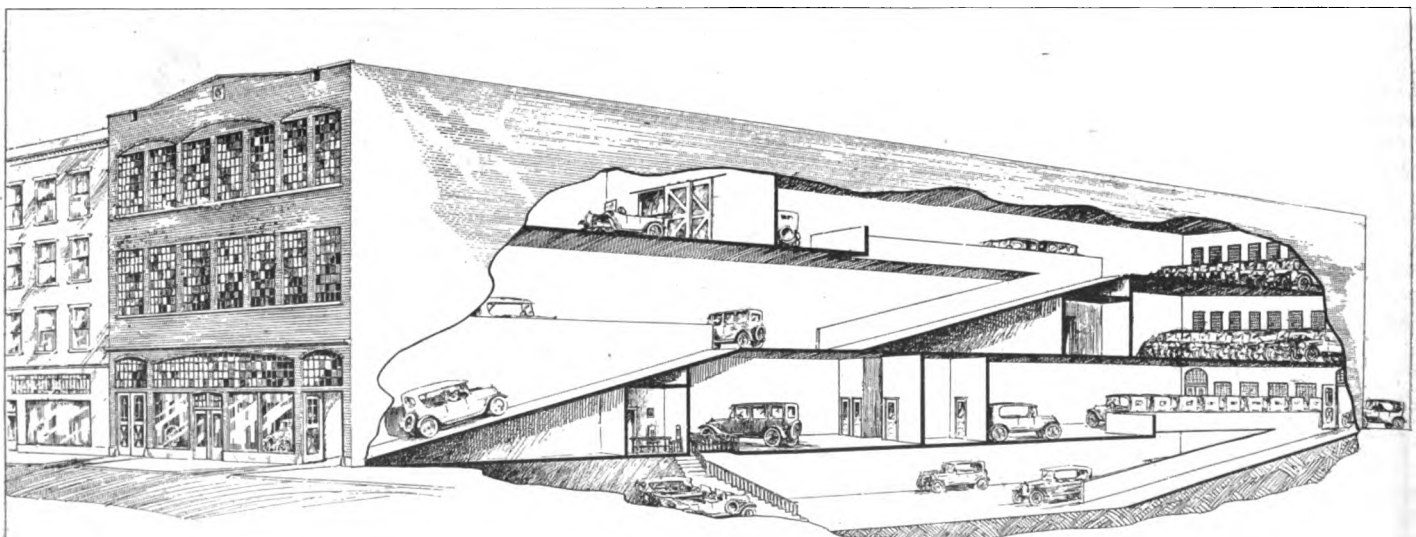
on storage arrangement, usually results in a considerably higher percentage of non-producing area. On the other hand there are no operating expenses in connection with it, and it affords a greater measure of convenience to the customer. All of these factors should be considered in making the decision between the ramp or elevators. The advantages of one should be weighed against the disadvan-

tages of the other, and the construction which affords the greater operating efficiency selected.

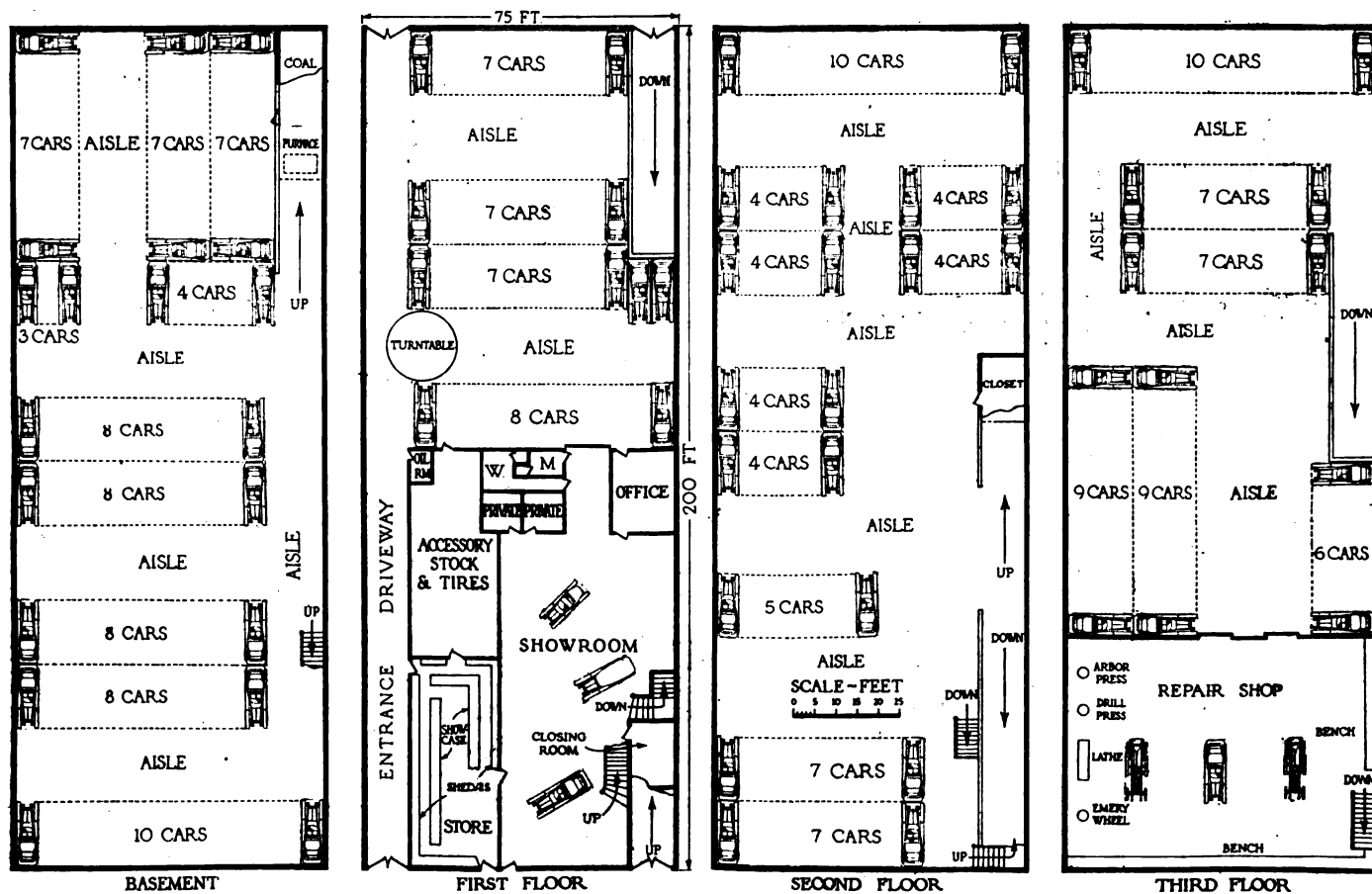
Due to the presence of driveways on either side of the front of the building, the frontage available for showroom and accessory store is reduced to about 50 ft. However, the width of the showroom is greater at the rear where it extends under the ramp. The accessory store is a separate unit and this is in accordance with the modern idea of departmentization. Directly behind it is the accessory and parts stockroom. Many times dealers reduce the merchandising possibilities of their stores by using them to store accessories rather than for display exclusively. A stockroom is well worth while.

The balance of the building, with the exception of a portion of the third floor, is given over to car storage. The car arrangement is not ideal. Some of the rows are rather inaccessible and these should be used for cars that are in dead storage.

The service department is located on



Cutaway view of three-story building using ramps. With the exception of portions of the first and third floors, the entire building is devoted to car storage.



Floor plans for building. The entrance to the basement is down a ramp from the rear street; entrance to the first floor is had from either the front or rear, and the upper stories are reached by ramps from the front of the building

the third floor at the front. In this position it has the advantage of light and ventilation from the street windows and also from skylights above. The special tools provided for are the lathe, drill press, emery wheel and arbor press. It will no doubt be necessary to use a portion of the shop for a toolroom, but we have not provided for this feature because it may be desirable to change the position of the machine equipment.

Buick Alters Fitments

The 1921 Buick has been slightly changed in the body fitments. Window stops are now placed on the rear windows of the 48 Model, and the windshield has been changed so that the upper leaf opens out from the top. The door window construction has also been slightly altered in that the glass does not go over a lift. The Alemite lubrication system has been added to all models, and cord tires are standard equipment on the enclosed models.

Westinghouse Unites Automotive Sections

SPRINGFIELD, MASS., Jan. 18—The automotive equipment department of the Westinghouse Electric & Mfg. Co. has completed plans to increase efficiency by establishing all divisions here, and this centralization is expected to be advantageous to the company and to its automotive customers.

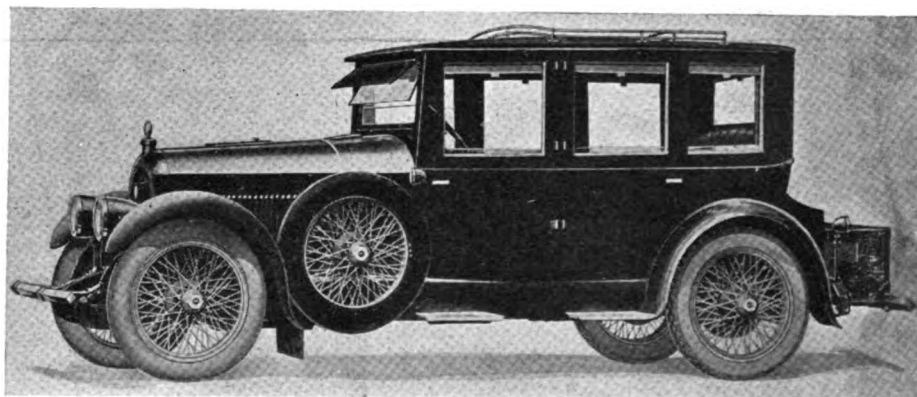
For manufacturing, a modern plant, entirely specialized, has been completed at Springfield.

The automotive engineering department, under charge of R. G. Thompson, is located in the plant. There are two main divisions, one of which has charge of the design of new apparatus and the other with the application of existing apparatus to automobiles.

A three-story building at 82 Worthington Street, together with the third

floor of the adjoining Post Office Square Building, houses the general sales department, with its commercial engineers, the service department and the stocks of supply parts.

The purpose of the service department, which is in charge of M. B. Speer, is to give any necessary assistance in repair and maintenance of Westinghouse automotive equipment, the correction of troubles that may arise, and the distribution of parts to service stations.



The custom built Coach-Sedan is the newest addition to the Kissel line. The body is built more compactly than the usual sedan and is more like a coach body. The seats are wide enough to accommodate three persons. The fenders are of the new crown type with leather mud guards on each front fender. Extra wire wheels are mounted on each side of the hood. The trunk rack at the rear and the luggage rail on top of the body permit the carrying of extra baggage on long trips without inconvenience to passengers

Winter Business

Send in a Winter Business Idea—Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management directed toward getting winter business and winter profits. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever we shall be glad to shape it up for you.

Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Women Canvassers Produce Car Prospects

ALTHOUGH Detroit automobile dealers have not pushed their sales campaigns to the extent that many dealers in other cities have gone in evolving unique methods, the plan in vogue with Johns Brothers, local Ford dealers, in using women canvassers stands out prominently. Indeed it is believed to be the first instance where the fair sex has been inducted into the strenuous business of automobile merchandising on a large scale.

T. W. Hockett, sales manager, inserted an advertisement for intelligent young women of good appearance, and good conversationalists, to do soliciting, offering an unusually good salary with additional bonus where their efforts resulted in sales of Ford cars. As a result he had a half hundred replies and selected fifteen, dividing them into squads of three with a captain for each squad. The city was charted and the campaigners started forth with the result that after less than a week's trial of the scheme the firm's business has been increased fifteen per cent due directly to their efforts.

The young women go from house to house making no attempt to sell cars but simply securing entree as a friendly caller and ascertaining if the family possesses a car, if they would like to and just what stands in the way. Where interest is shown that gives promise of a sale the name is turned over to the salesman in that district and his call follows.

Approximately 40 per cent of the calls made by the young women have furnished "call-backs" or salesmen's calls and 15 per cent of the total have resulted in sales. The young women report courteous receptions in every instance and aside from the actual results in sales the advertisement gained by the company is regarded of inestimable value. The salaries of the solicitors are \$30 weekly with the solicitor receiving 50 per cent of the bonus for each sale resulting from her efforts and the captain of her squad receiving the other half.

"Trade-In Wash" a Money Maker

HANCOCK GARAGE, Detroit, advertised, during show week last year, a special "trade-in wash" at \$2 more

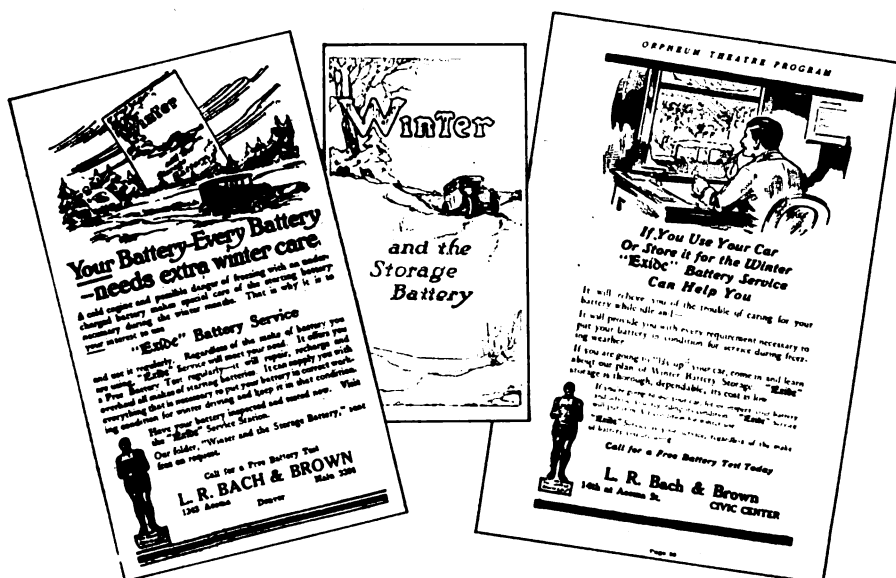
than the regular wash and polish. It included a "spoke manicure" with each wheel jacked up, scrupulous motor, radiator comb, and running-gear cleaning, use of vacuum cleaner on upholstery, carpets, and top and careful polishing of everything from tire valve caps to top bows, and took about one hour longer than the regular \$1.50 to \$2.00 wash. At least a score of owners, about to dispose of their old cars, ordered this special service to enhance the appearance value of the same. The wash-rack net profits for the week were \$17 above normal, so the idea has been repeated about once a month since, with special advertising for state fair, enclosed car, and regular winter show weeks.

This Helps Accessory Sales for a Wisconsin Dealer

A NORTHERN Wisconsin dealer who sells on time to a considerable extent, now keeps a card record of all customers who buy in this way. Just before a payment is due, he has the typist fill in a form letter—varying these from month to month—in which the customer is invited to come and look over some accessory or other article. The concluding paragraph of the letter is something like this: "Inasmuch as the next payment on _____ is due Wednesday, you will be coming in, and we want you to take special note of (mentioning an article) which you will find of great interest at this time." A drive on tire chains in this fashion resulted in a good sale.

Phone Sales Idea That Sells Tires and Accessories

A GENERAL order has been issued in one of the large automobile establishments of Milwaukee, including a state agency, a local agency, service shop and tire and accessory store, that hereafter every customer who calls on the phone is not to be "good-byed" until asked if there is not some other department he might wish to talk to—mentioning the departments if possible. It is reported that there has been a noticeable increase in business in tires and accessories, and also in the service station directly traceable to the plan.



Whether a motorist drives his car or stores it this winter, he is a prospect for battery service. Here is a type of winter battery service advertising that is building business for the L. R. Bach & Brown Co. in Denver.

This Service Gets Prospects

DID it ever occur to you that you can capitalize the average motorist's dread of the ever lengthening lines at the offices where license tags are issued yearly?

The Franklin Motor Car Co. of Newark, N. J., does it. It is just one of the little features of this company's service policy that is taking the bumps out of being a car owner.

Through special arrangements with the Registration Bureau in the City of Newark the Franklin company accepts the motorist's signed order for new license plates and driving licenses, turns the registration fees over to the proper representative of the motor vehicle department, secures the licenses and tags and presents them to the motorist when called for.

When the owner leaves the money with the company with which to purchase the new tags, he receives a receipt. In addition to the usual form of receipt it contains a little chatty communication concerning Franklin cars and the information that any names of prospects written on the line prepared for such purposes on the receipt will be treated with confidence and greatly appreciated.

Late each year the company sends out several thousand announcements of their desire to secure licenses for motorists, these being addressed principally to their car owners and prospects. Several sales of new Franklin cars have been traced directly here to this practice.

Postcards That Sell

THE Riverside Motor Sales, Inc., a Ford dealer in New York City, is getting exceptionally fine results in the sale of Ford commercial cars by sending post cards to all concerns in the territory who may have use for Ford trucks. The card contains a picture of a Ford delivery car and this simple statement: "We are specializing in cars for your line of business. Prices have been reduced. Call us by phone for quotations. River-

It isn't too soon to begin collecting ideas for business building next fall. Here are forms used by the Franklin Motor Co., Newark, N. J., in giving service that produces car sales. Read "This Service Gets Prospects" on this page

side Motor Sales, Inc." A similar card featuring the Ford sedan is being sent to all physicians in the city.

Salesmen Set Own Quotas in Contest

THE City Hall Garage, White Truck dealer in Paterson, N. J., successfully stimulated the sale of commercial vehicles during November and December with a contest. Before the contest opened each salesman was asked how many trucks he *thought* he could sell during the period. Then a prize of a trip to Atlantic City with all expenses paid was offered to each salesman who sold the number of cars that he, himself, had agreed to sell. The first week of the contest developed three sales directly traceable to the contest efforts.

Monthly Fee for Road Service Gets Trade

BY paying a monthly fee of one dollar customers of Thompson Service Bureau Co., Cincinnati, are entitled to road service without additional charge at any point within 20 miles of the company's service station. The road service includes: Changing of tires, delivery of gasoline at prevailing market prices, starting car, ignition or carburetor, towing of car to any point within service zone if it is unable to travel under its own power and inspection of car at the service station whenever desired by customer. In addition, club members are allowed a special discount on tires and tubes and the company maintains a complete wrecker's outfit for the convenience of its customers.

Sells Car Washing Accessories

OWNERS who wash their own cars are prospects for suitable soaps, sponges, cloths, brushes, chamois and polishes. Herbert Brownlee, of the Saf-fold Garage, Cleveland, has built considerable business in this class of owners, by sending out cards directing attention to this stock, especially selected for the purpose.

He Makes 'Em Feel Like Coming In

"COME in Anyhow." This sign over the entrance of a dealer's establishment on the Main street of a medium sized Iowa town is getting business for its author. It is typical of the personality of the dealer and his business. He shows his goods and talks about them in a way that impresses the customers with the idea that it is a pleasure to do so, and they soon find that there is a pleasure in buying there.

Bringing the Service Manager "Up Front"

The service manager is a real official in the Auto Service Co., a dealer organization which sells Paige cars and trucks in Hornell, N. Y. His name is right up at the top of their letterhead on a par with that of the sales manager. That's where it belongs. A real service department is as essential to the success of the business as the sales department. If you consider it as something that you must at least make a pretense of having, you had better change your viewpoint. Because service is a big point in the mind of the prospect. A good car with bad service means dissatisfaction, but a good car plus good service adds up to profits

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Special Clause Not Needed

Editor Motor World: As a member of the committee appointed by the Pueblo Auto Trades Association to investigate the methods pursued in other cities by other dealers to protect themselves against suits instigated by owners of cars lost through fire or theft while in the dealer's garage and care, the writer would very much appreciate any information that you can give him regarding anything along this line.

We have several instances locally, wherein the garage owner has been sued for loss of cars in fires. One case is now in court being defended by the Litz Garage assisted by the Auto Trades Association. In this instance every car that was in running order or had an ignition key in place, was gotten out of the garage. The one in question could not be driven out because the owner insisted upon removing the ignition switch key when he left the car in the garage owner's care. For this reason it was impossible to get the car out of the garage and it was, therefore, a total loss to the owner as he was not carrying insurance. He is now suing Litz for the full price of the said car and confidently expects to defeat him. To make a test case of this for our satisfaction the Auto Trades Association has decided to aid Litz in fighting the case, and we would appreciate very much any aid or information that you can give us as to the methods which can be pursued by the Auto Trades Association to protect themselves against cases of this kind, such as a written contract for the owner to sign, a clause on the storage and repairing of cars, or anything else you might suggest.—E. J. B., Pueblo, Col.

Answer—A garageman is only required to use ordinary care to protect property left in his car and is by no means an insurer.

Of course a garageman is, and ought to be liable for any negligence on his part that causes loss to an owner, etc. Unless there are some facts you do not mention the garageman you name will probably win his case, as he does not appear to have taken less care of the cars than an ordinary man would take of his own property.

There is no objection to putting a clause in a form of contract to be signed by the owner but as a matter of fact you really do not need it. You are liable only for lack of care in cases of this kind and your customer is likely to want a

court to decide whether you used due care or not, contract or no contract.

Peculiar Liability Case

A peculiar case involving the question as to whether or not an automobile salesman was engaged within the scope of his employment when he was shot by a sheriff's posse, was recently decided by the Supreme Court of Minnesota, in the case of Wold vs. Chevrolet Motor Co. 179 N. W. pg. 219.

The salesman had been employed to sell cars, to visit local dealers, to secure

When Is Employer Liable?

A SALESMAN, establishing sub-dealerships for his employer, was mistaken for an automobile thief and shot by a sheriff's posse while riding with a prospective sub-dealer.

He died. The Supreme Court of Minnesota decided that the salesman's death arose out of his employment and compensation was awarded under the workmen's compensation act.

Is there something about the operation of your state's Employers' Liability Law that you would like to know?

Ask Motor World.

sub-dealers, and to help organize various territories. It appeared that on the day he was shot he had called upon a dealer, had introduced himself and had been invited to take an automobile ride. He accepted and the dealer started out with two other persons in the car. On the way they towed in a disabled car and then took the road to another town. The dealer showed signs of mental derangement but not enough to cause his passengers to interfere with him even when he was driving at high speed.

A sheriff who had been informed of the theft of a large touring car, however, heard of the peculiar way in which the car was being driven and concluded it was the stolen car. He summoned aid and prepared to stop the car. A posse was collected and stationed at the roadside. When the dealer's car appeared being driven at a high rate of speed, with the muffler cutout wide open, and failed to stop on command, the posse opened fire. The salesman who had been sitting on the front seat was struck by a bullet and killed. His minor children, the Supreme Court decided, were entitled

to compensation under the Workmen's Compensation Act, on the theory that the accident arose during the course of his employment.

Which Claim Has Precedence?

Editor Motor World: I represent a dealer in this city in a suit to foreclose a mechanic's lien, and I submit below the facts and this dealer whom I shall call X shall consider it a great favor if you will please consider them and let us have your opinion.

X sells A a car. The note is sold to a loan company. The note is recorded showing title in the loan company. Regular lease note proposition. X the dealer is the endorser. The buyer A fails in his payments and X has to take the car back and make the payments that A did not make. In the meantime A has been in a big smash-up and puts this car in a garage for repairs, which repairs are made and a mechanics lien recorded against the car. A maintains to X that he has not encumbered the car in any way and X not knowing of the smash up pays off the notes. Now comes a summons in the case of garage et al vs. A et al to foreclose the lien. In the meantime X being a little pressed for funds on account of a decline in trade procures from another loan company \$600.00 on the car. He now has the car in his possession having been unable to dispose of it. Where does the dealer get off? A is evidently a man of small responsibility and having failed to collect the garage bill from him the garage people are out "to follow the car."

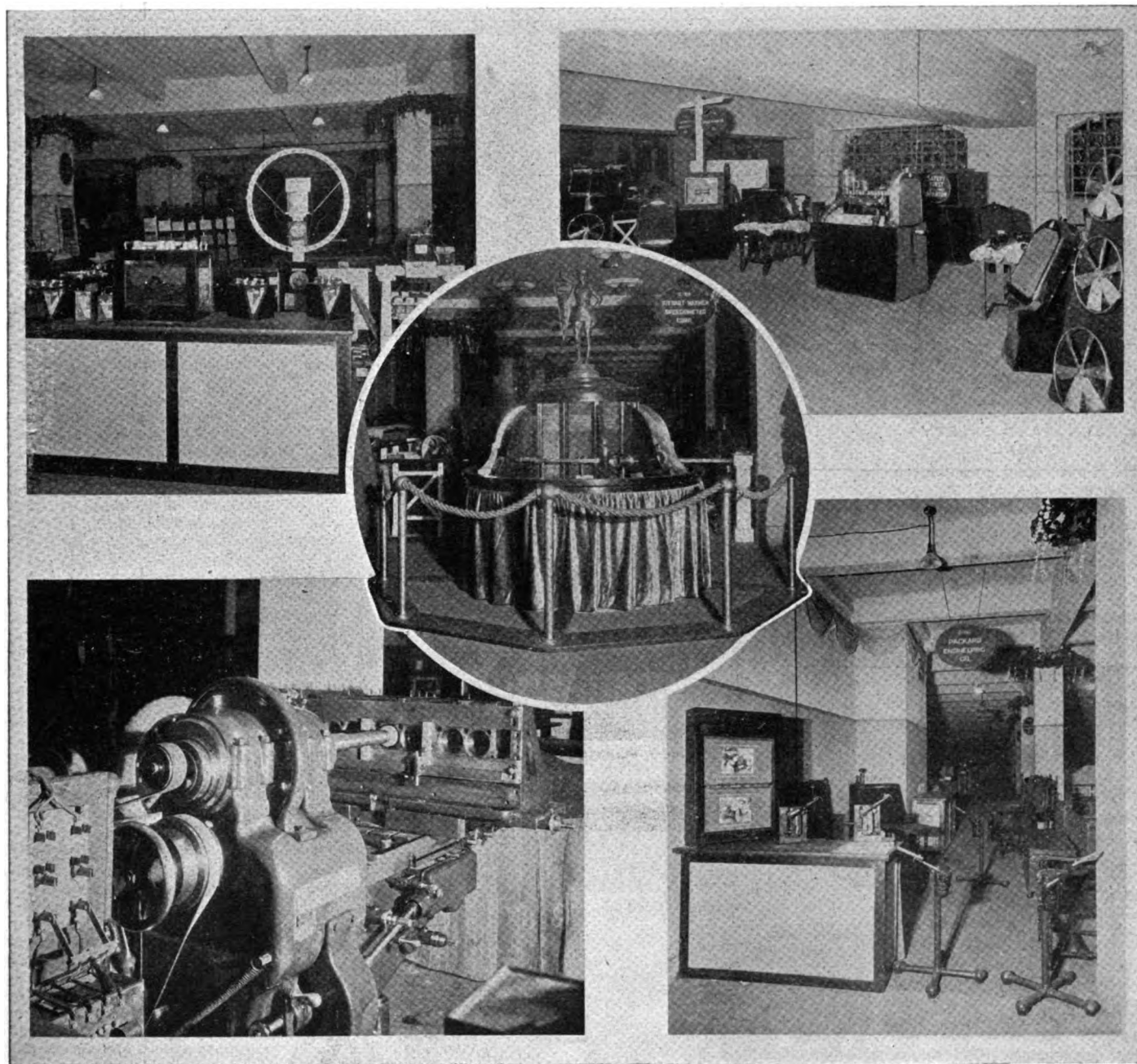
What is your opinion of the status of the dealer? ALL parties and deals under the Indiana Law. Your advice on this will certainly be appreciated by Mr. X and myself. As the case comes up early next month I would appreciate your early reply.—J. B. G., Attorney at Law, Richmond, Ind.

Answer—We have looked through our records without success to find a case bearing on the respective rights of dealer and garageman as you set them out above, nor have we been able to find any case under Chap. 167 of L. 1915, of Indiana.

In New York it has been held a lien comes first. In Tennessee it has been decided vice versa. My impression is that in your state the court would be inclined to hold that the lien is a subordinate claim, but I have no authority I can give you. Let us know the result of your case.

Real Merchandising Displays at the Show

Big Back to Selling Appeal Found in Many of This Year's
Automotive Equipment Exhibits



BEAUTY, dignity and sales appeal were not features that were exclusive to the car exhibits in the New York show last week. Up on the third and fourth floor of the Palace where the accessory, parts and equipment exhibitors held forth, there were displays that were easy to look at, and which helped to sell the articles on view. There was plenty of evidence at the show that this part of the automotive industry is endeavoring to get the public back to buying by getting back to selling itself.

Look at the picture of the Stewart-Warner exhibit. Here is a beautifully

bronze statue. The woodwork is beautifully finished, and the curtain around the base is of rich, purple velvet. The center portion, which revolves slowly, is divided into compartments in which gold-plated models of this company's various products are mounted. The display is enclosed by a heavy, purple cord supported by brass standards.

A beehive with live bees was used to feature the trade mark of the Wi herbee Storage Battery Co. The hive was made in the form of a six-volt battery, and was provided with glass sides. Another detail was a lifting magnet, energized

In the rear of the booth, there was a ring of lights, with a total candle-power of 1000, and these were supplied from another battery.

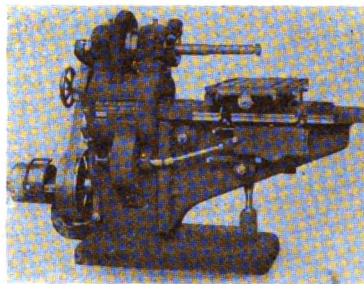
At the Sparks-Withington booth, there was lots of room for the spectator to move around and examine the display at close range. The articles on display were mounted attractively, and the stands were well arranged. A special internal grinder for service stations was shown at work on a six-cylinder block, by the Heald Machine Co. The Packard Engineering Co. had one of the smaller exhibits which was notable for its good

NEW YORK SHOW INTRODUCES

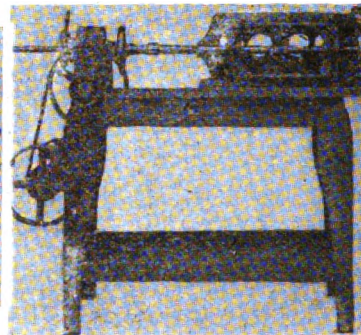
Comfort and Convenience of Motor Car Driving Enhanced by New Products

HEALD INTERNAL GRINDER No. 55

A new machine for regrinding 1-, 2-, 4- and 6-cylinder cast-in-block engines. The wheel spindle regularly furnished with the machine grinds hole 2 3/4 in. diam. and larger by 11 in. long, and 3 in. diam. and larger by 18 in. long. The horizontal and vertical adjustments have micrometer dials. Equipment includes wheel spindle and arm, grinding wheels, one mounted diamond, two diamond holders and necessary wrenches. Price, complete with jig, \$2400. Heald Machine Co., Worcester, Mass.



Heald Internal Grinder



Wilson Combination Machine

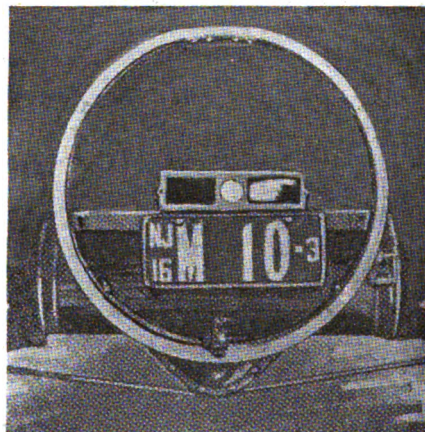
cars equipped with Westinghouse shock absorbers. Prices: For heavy cars, nickel finish, \$16.50; black enamel, \$15.50; medium weight cars, nickel finish, \$14; black enamel, \$13. U. S. E. Corp., 7 West Sixty-first Street, New York City.

WILSON COMBINATION MACHINE

This machine takes care of seven standard operations on the Ford engine. It is used as a bench while rebabbiting main bearings; a fixture is furnished for this purpose. There is a babbitt boring fixture and a main bearing reamer. The machine may also be used for assembling and disassembling, burning-in and running-in, cylinder reboring, etc. Price, \$365. K. R. Wilson, 10 Lock Street, Buffalo, N. Y.

GREEN HAND SAFETY SIGNAL

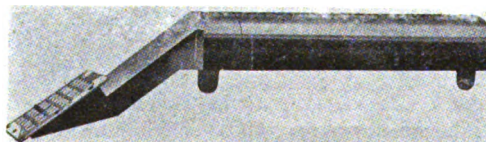
The front signal goes on the license plate bar, and the rear on the tail-light bracket. Current is supplied by the lighting system on the car, and the signal is operated from a switch on the steering column. Throwing the switch to the left, illuminates a green hand pointing left, and the opposite for right. Throwing the switch back lights both hands indicating a stop. Complete set includes front and rear signal, tail-light, switch and cables. Green Hand Safety Signal Co., 47 West Thirty-fourth Street, New York City.



Green Hand Safety Signal

*WARM-A-FORD

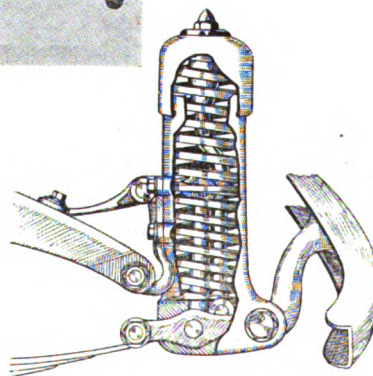
A special heater for the Ford car. It fits over the exhaust manifold. The fan draft passes into the device and is heated by the manifold. The warm air is delivered to the front seat through a register. The register may be closed by means of a foot-operated lever. The entire device is finished in black japan. Price, \$5. Kokomo Electric Co.



* Warm-A-Ford

U.S.E. SHOCK ELIMINATORS

This shock absorber is installed between the car and the frame in place of the shackle. It consists of a metal casing in which are assembled two spiral springs, the upper one taking the load, and the lower the rebound. The bumper is part of the front shock eliminators, and is connected with the load spring to absorb any shocks due to collision. Price, complete set, \$135. U. S. E. Corp., 7 West Sixty-first Street, New York City.



U. S. E. Shock Eliminators

TAYLOR BUMPER

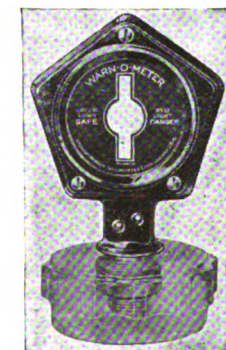
This is a spring bumper for use on the Ford car. It is used on both the front and rear ends. U-bolts, which pass around the fender irons, are used to attach it to the car. It is furnished with nickel-plated front bar. Franklin Brass Mfg. Co., 1710 Fairmount Avenue, Philadelphia, Pa.



Taylor Bumper

STEWART WARN-O-METER

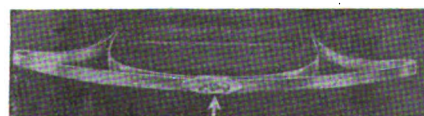
Fitted to the radiator cap or front fender, the Warn-O-Meter is wired back to a thermostat attached to the engine. Concealed in the instrument are two small light bulbs. At normal temperatures a green light shows, but should the cylinders become dangerously hot, the thermostat automatically switches on a red light. The device is difficult to steal because, although a thief might take the indicating unit, it would be valueless without the thermostat. The design on the front of the instrument may be anything desired by the purchaser.—Stewart-Warner Speedometer Corp., Chicago.



Stewart Warn-O-Meter

U. S. E. SPRING BUMPER

Various models of this bumper have been designed for attachment to the following cars: Buick, Cadillac, Chandler, Dodge, Jordan, Lafayette, Locomobile, Mercer, Rolls-Royce, Studebaker, Packard, Paige, and



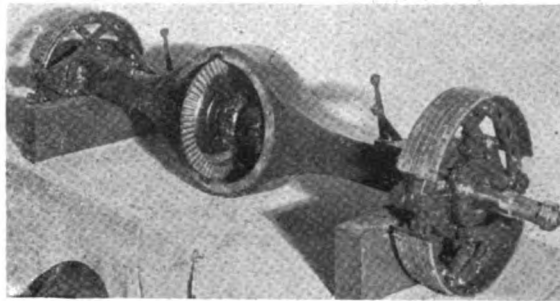
U. S. E. Spring Bumper

NEW ACCESSORIES AND TOOLS

Additions to Many Automotive Equipment Lines
Promise Greater Selling Opportunities

CLARK SPEED WAGON AXLE

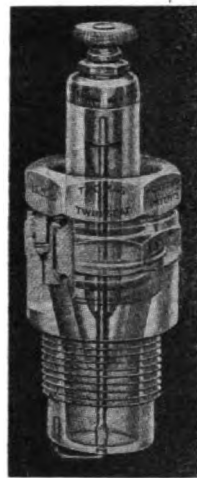
A bevel gear rear axle for use on high speed trucks of one-ton or less capacity. The housing is made of pressed steel, and the differential is supported in a carrier. It can be removed from either the front or the rear of the axle. Two standard gear reductions are provided—5.9 to 1 and 6.2 to 1; spiral bevel gears are used with the larger reduction. The weight of the axle, including hub parts, is about 360 lbs. The hub is mounted on a splined shaft, and when it is drawn up tightly, it clamps the inner race of the wheel bearing. The brakes are of the internal type, $2\frac{1}{2}$ in. wide. The brakes have oilless bushings. Clark Equipment Co., Buchanan, Mich.



Clark Speed Wagon Axle

THOMAS TWIN SEAT SPARK PLUG

This plug has a removable center electrode. It consists of three parts—the center electrode which also carries the insulator, the shell body, and the binding nut and gasket. When it is necessary to clean the plug, only the center electrode need be removed. Metallic sealing gaskets are used. The plugs may also be used instead of priming cups. If an insulator is broken, it is only necessary to replace the center electrode assembly. Price, \$1.50. Thomas Spark Plug Co., Roselle Park, N. J.



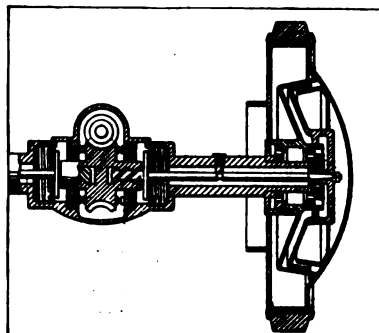
Thomas Twin Seat Spark Plug

ATLAS HYDRAULIC JACK

This jack is built entirely of steel and is furnished in $1\frac{1}{2}$ and $7\frac{1}{2}$ -ton sizes. The liquid used is a light oil, and the cylinder is designed so that it can be easily refilled. Prices are \$7.50 and \$15, respectively. Sunderland Corp., Newburg, N. Y.

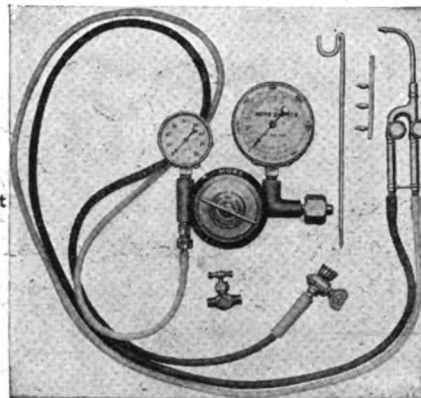
STOKES REAR AXLE

In this axle, two leather-faced cone clutches are mounted on the rear wheels. The driving cone is drawn inward by the thread on the inner end of the driveshaft, and engages with the inside cone when going forward. In reverse, the driving cone is forced out and engages with the outside cone. When coasting, neither clutch is engaged so although the wheels are revolving, the driveshafts are not. No differential is used as the clutches take its place. Stokes Engineering Co., 384 East 133d Street, New York.



Stokes Rear Axle

Hoke Shontz Lead Burning Equipment



HOKE SHONTZ LEAD BURNING EQUIPMENT

The complete equipment includes regulator and gage, high pressure indicating gage, torch with two 6-ft. lengths of hose, four sizes of tips, and bench hook. No water seal is needed with the regulator as it is provided with a safety device. The torch is provided with regulating valves which are operated with the thumb and forefinger, and in this way the flame is under the instant control of the operator. Two or more torches may be used with one regulator. The units forming the outfit may be purchased separately if desired. Price, complete, \$55. H. B. Shontz Co., Inc., 157 West Fifty-fourth Street, New York City.

J. H. TONNEAU SHIELD

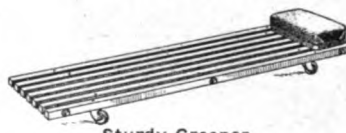
The shield is attached to the body irons which extend under the upholstery at the back of the front seat. Its position can be adjusted by moving it either back or forward on the extension arms provided for the purpose. The position of the wings is also adjustable. A removable, water-proof apron hangs from the bottom of the shield. Prices, \$70 to \$135, depending on type and size. Tonneau Shield Co., 1777 Broadway, New York City.



J. H. Tonneau Shield

STURDY CREEPER

This creeper is made of seasoned hardwood slabs, 40 x $1\frac{1}{4}$ x $3\frac{1}{4}$ in., which are bolted together. No nails are used in its construction. The castors have ball bearings. A padded head rest is provided for the neck and shoulders. Price, \$2. Gray-Heath Co., 542 North Park-side Avenue, Chicago.



Sturdy Creeper

BATOMETER

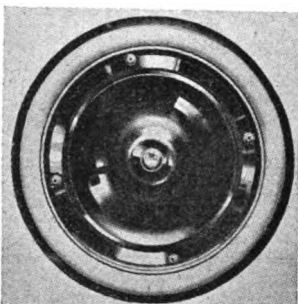
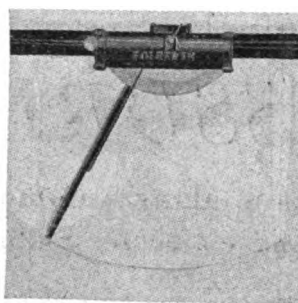
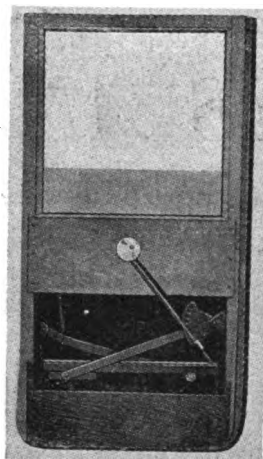
A device for indicating low electrolyte level. The filling plugs in the end cells of the battery are replaced by electrodes. If the solution falls below the tip of either or both of the electrodes, the batometer, which is installed on the dash in place of the ammeter, indicates this fact on the lower scale. The upper scale indicates the charge or discharge rate of the battery. Electrodes are furnished to fit all standard makes of batteries. Price with two electrodes, \$12.50.—Fairbanks Co., Distributor, Lafayette and Broome Streets, New York City.



Batometer

DURA CRANK WINDOW REGULATOR

The handle on this regulator turns a worm which actuates the raising lever. Windows equipped with this regulator are always locked and cannot be moved except by the handle. They can be installed on any car. Specifications necessary in ordering are width between slide channels, length of glass travel and position of handle. The complete assembly consists of 29 parts. Dura Mechanical Hardware Co., Toledo, Ohio.



(Above) Dura Crank Window Regulator
(Below) Star Light Signal

Folberth Automatic Windshield Cleaner
Peerless Wheel Disks for Fords

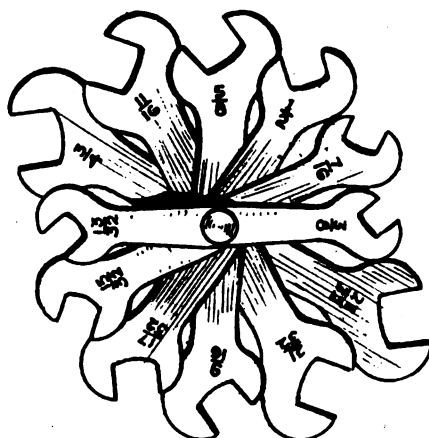


STAR LIGHT SIGNAL

This signal replaces the tail-light, and a standard red light shows at driving speeds. As soon as the brake is touched the word SLOW is flashed in large white letters. This is accomplished by the rotation of the signal through a quarter turn. The installation is said to be simple. Price, installed, \$10. Universal Star Light Signal Corp., 718 Atlantic Avenue, Brooklyn.

BERSTED UNIVERSAL WRENCH SET

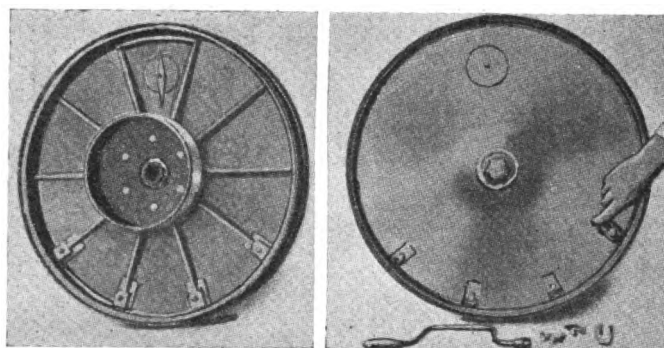
This set contains six individual wrenches with twelve different size openings. They are made of steel and are case hardened. Each wrench is nickel plated. They may be locked together by means of a bolt passing through the center. Each set is packed in an individual carton. Price \$1.25. Bersted Mfg. Co., 765 Mather Street, Chicago.



Bersted Universal Wrench Set

PARKER ALUMINUM DISK WHEELS

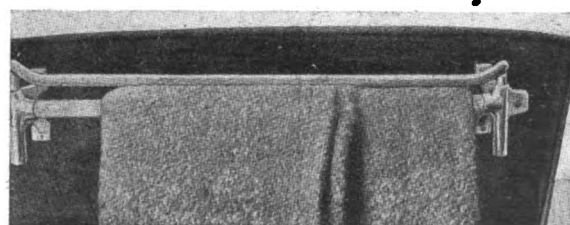
Combined in one aluminum casting are a disk, ten reinforcing ribs, and the hub. The rim is made of a single piece of steel, having a diagonal transverse split to facilitate application of the tire. Half the circumference of the rim is supported directly on the edge of the wheel, and the other half on four toggle clamps, the wheel being cut away sufficiently on this side to allow easy operation in mounting the rim. These wheels are used on the Franklin. Parker Wheel Co., Cleveland, Ohio.



Parker Aluminum Disk Wheels

TEETSOW BALL BEARING

These bearings are of standard dimensions, which make them interchangeable. They are of the radial-thrust, double row type. The races are made of chrome steel, hardened and ground. The balls are guaranteed accurate within 0.0001 in. These bearings are guaranteed against defective workman-



Safety Robe Rail

ship and materials for one year. Teetsow Bearings Co., Inc., 154 Nassau Street, New York City.

FOLBERTH AUTOMATIC WINDSHIELD CLEANER

The cleaner is attached to the top of the windshield frame in front of the driver's seat. A rubber tube runs from the cleaner through the dash, and is connected to the intake manifold by fittings which are furnished. The suction from the engine causes the cleaner to sweep back and forth automatically. Packed in carton, complete and ready for installation. Adle Auto Specialty Co., Distributor, 301 West Fifty-Seventh Street, New York City.

PEERLESS WHEEL DISKS FOR FORDS

These disks are stamped from 20 gage steel, finished in black. They fit over the hub cap on the outside and are bolted with four bolts to the felloe of the regular wood wheel, or demountable wheel. Packed in cartons, in sets of four, twelve cartons to a crate. Price, per set, \$10. Corcoran Mfg. Co., Cincinnati.

L. M. WHEELS AND AXLES

The wheel is made of aluminum, and has curved, radial spokes somewhat similar to those used on freight car wheels. The axle is of the double reduction type, and its features are efficiency, light weight and large road clearance. The differential is located on the propeller shaft instead of on the axle shafts. L. M. Axle Co., Cleveland.

AMERICAN FLASHLIGHTS

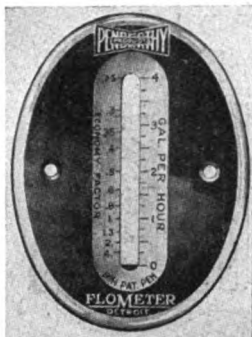
Furnished in vulcanized fibre cases, or in nickel finished metal cases. There are no movable parts within the case. There is a little device called a shock absorber at the base of the lamp to protect it from damage. The switch is of the dual contact type. Batteries to fit these lights are furnished. Mazda bulbs are used. American Carbon & Battery Co., East St. Louis, Ill.

SAFETY ROBE RAIL

This is a robe rail which has a locking bar which comes down and clamps the robe so that it cannot be removed. The device is self-locking. The device is finished attractively. Price, \$20. Motor Car Supplies Co., Inc., 238 West Fifty-sixth Street, New York City.

PENBERTHY FLOMETER

An instrument that indicates at all speeds, the hourly rate of gasoline consumption. Used in conjunction with the speedometer, it shows the economy of the car. The dial is finished in black enamel and silver plate. It may be used with either the pressure or vacuum gasoline feed systems. Penberthy Injector Co., Detroit, Mich.

**COLE VISIBLE GASOLINE GAGE**

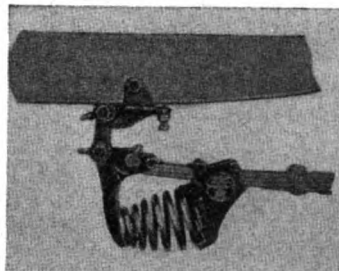
A float operated device for indicating the quantity of gasoline in the tank. The float is connected by means of a wire running in a conduit, to an instrument mounted on the dash. A vertical type of instrument, known as Model A, is provided for use on trucks and Fords. Price, Model A, \$10.50; model C, \$18. Cole Visible Gas Gage Co., 1364 South Figueroa Street, Los Angeles, Cal.



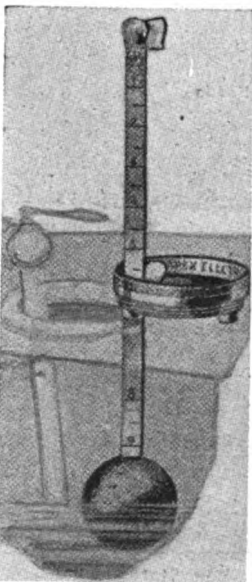
(Above) Penberthy Flometer
(Below) Cole Visible Gasoline Gage

HASSLER SHOCK ABSORBERS FOR DODGE

All the essential features of the Hassler design are incorporated in this new appliance. These shock absorbers can be applied without changing any part of the car or altering the spring construction. Price, \$35 per set. Robert H. Hassler, Inc., Indianapolis, Ind.

**Hassler Shock Absorber****APEX GASOLINE GAGE**

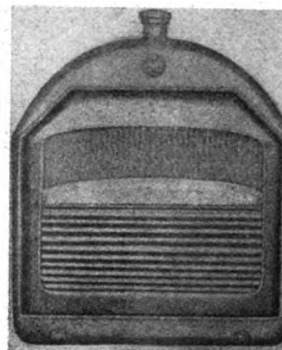
This is a gasoline gage for Ford and Chevrolet cars. It consists of a cap, which replaces the standard cap, and the gage. The gage is float operated, and the indicator, which is attached to the float, is made of spring steel, with the graduations etched on it. Price, \$1. Apex Electric Mfg. Co., 280 Broadway, New York City.

**Apex Gasoline Gage****REFLECTOSCOPE**

A rear vision mirror which is furnished in a number of different models for use on open cars, enclosed cars and trucks. A variety of brackets are provided. Prices range up to \$6. Lawson Auto Specialty Co., 47 Bergen Street, Brooklyn, N. Y.

WHICH WAY ADVISOR SIGNAL

On the dash or instrument board, there is a quadrant which is divided into notched sections, each marked to correspond with the reading on the signal. The lever on the quadrant is connected with the signal by means of a wire encased in a conduit. This wire operates the device. For emergency use, an oil lamp

**Which Way Advisor Signal****U. S. E. Shutter**

is provided to replace the electric bulb. The signal shows back, slow, stop, left and right. The signal proper is mounted on the rear license plate bracket. Which-Way Advisor Signal Co., 797 Bailey Avenue, Buffalo, N. Y.

U. S. E. SHUTTER

The frame of this shutter is made of pressed steel, and is shaped to conform with the lines of the radiator. It is finished in black enamel. The shutter is made of heavy corrugated rubber. The shutter acts like a curtain and may be raised and lowered from the dash. The dash control bracket is furnished in polished aluminum. Price, \$20. U. S. E. Corp., 7 West Sixty-first Street, New York City.

GILFILLAN SPOTLIGHTS AND BRACKETS

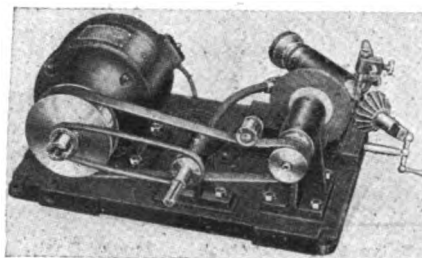
A line of spotlights and brackets which fit all the standard makes of cars. The Westerner, type SLW, is listed at \$15; the Pathfinder, type SLP, at \$7.50; and the Californian, type SLC, at \$12. A rear sight mirror for use with these spotlights is also manufactured. Price \$1.60. Ten feet of extension cord for use with these lights is priced at \$2. Superior Lamp Mfg. Co., Distributor, 150 West Fifty-second Street, New York City.

**Gilfillan Spotlight and Bracket****COLE COWL RELITE**

A small mirror reflector which is attached to the side of any instrument on the dash. When installed it is so adjusted that it reflects the light from the dash lamp onto the dial of the instrument. The reflector is attached to the base by a ball and socket joint which makes it adjustable to any position. Price, \$1. Cole Visible Gage Co., 1364 South Figueroa Street, Los Angeles, Cal.

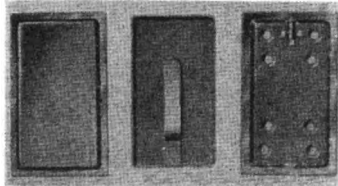
**Cole Cowl Relite****FRANKLIN PORTABLE REPAIR SHOP UNIT**

A portable machine tool for grinding and drilling operations. It consists of a flat base on which is mounted a 1/4-hp. electric motor, a belt driven grinding wheel, a swivel head fitted with draw back chucks, and necessary feed screws. The spindle in the head is driven through a worm and flexible shaft. A flexible shaft attachment is provided for use in inaccessible places. It has a chuck which takes a small drill, wire brush, or grinding wheel. Other attachments are furnished for grinding breaker contacts, and reamers. Franklin Machine & Tool Co., Springfield, Mass.

**Franklin Portable Repairshop Unit**

ACCESSO MAGNETIC LAMP

A trouble lamp with a magnetic base so that it can be attached to any steel or iron part of the car. The current from the battery, in addition to lighting the bulb, also magnetizes the base. The complete outfit consists of magnetic coil, base, lamp socket, 4 cp. bulb, nickel plated brass tube and hood, cord and plug. Price, \$5. Accesso Mfg. Co., 99 State Street, Boston.



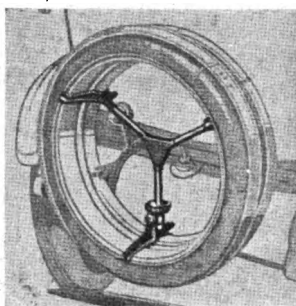
Accesso Magnetic Lamp
Accesso License Holder

ACCESSO LICENSE HOLDER

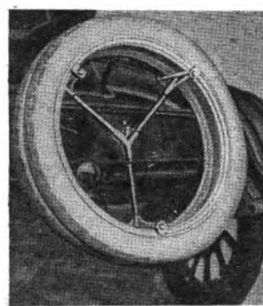
This device provides a place for all papers pertaining to car or driver. It is made of brass with either nickel or gun metal finish. The cover is held securely to the base by a patented fastener. Dimensions $2\frac{1}{2} \times 3\frac{1}{2} \times \frac{1}{2}$ in. Price, \$1. Accesso Mfg. Co., 99 State Street, Boston.

TREX TWINLOCK TIRE CARRIER

A double tire carrier approved by the Underwriters Laboratories. It is easily installed on the spare rim on the rear of the car. It is shipped dismantled and neatly packed in a compact container. It may be used on any car having a circular tire carrier. Price, \$16.50; West of Rockies, \$17.50. Trexler Co., 1418 Walnut Street, Philadelphia.



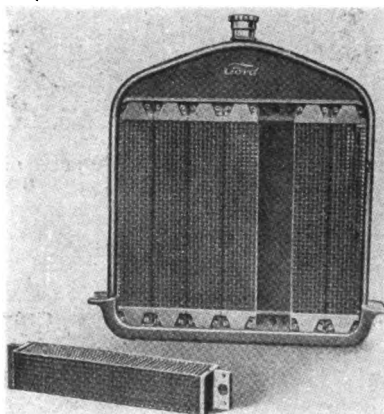
Trex Twinlock Tire Carrier



Letmont Tire Carrier

SECTIONAL RADIATOR FOR FORDS

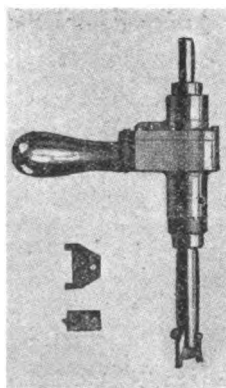
This radiator is made up of seven integral sections, each of which is independent of the other parts of the radiator. Any section can be removed in five minutes, and it is not necessary to remove radiator from car in changing sections. All parts which come in contact with the cooling water are made of brass. Shultis Automotive Corp., 16 West Sixty-first Street, New York City.



Sectional Radiator for Fords

VALVE GRINDER ATTACHMENT

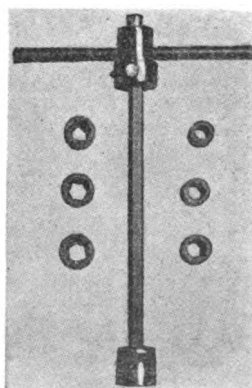
This tool is designed for use with the Type B, Arnold electric drill, but can be used successfully in the ordinary brace. It is equipped with dust-proof ball bearings, and makes 400 oscillations per minute. The reciprocating mechanism is simple. Price, \$12; with Type B drill, \$87. Arnold Electric Drill Co., New London, Conn.



Valve Grinder Attachment



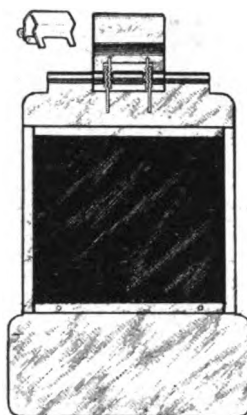
Tuway Dash-lamp and Plug Socket



Bay State Socket Wrenches

GLAR-STOP

Attached to the top of the windshield by means of a clamp, this device is provided with a colored center glass. When not in use, it may be swung up out of the way. It is held in the position it is placed by means of a ratchet. Price, \$3.50. Sedgwick Sales Co., 1409 Sedgwick Avenue, New York City.



Glar-Stop

DOUBLE DISK STEEL WHEELS

In this wheel, the hub, the rim and two pressed-steel disks, are electrically welded into one piece. They can be mounted on the same type of inner hub assembly as used for wire wheels. Goodyear quick detachable rims for straight sided tires are used. Standard sizes are carried in stock, and prompt delivery can be made on special types. Robinson & Smithers, Inc., 5 Columbus Circle, New York City.

LETMONT TIRE CARRIER

A spare tire carrier that attaches to the felloe band on the rear of the car. The only tool needed for installation is a wrench. It fits any size rim carrier from $30 \times 3\frac{1}{2}$ in. to 37×5 in. Price, \$9. Letmont Co., Inc., Brooklyn, N. Y.

TUWAY DASHLAMP AND PLUG SOCKET

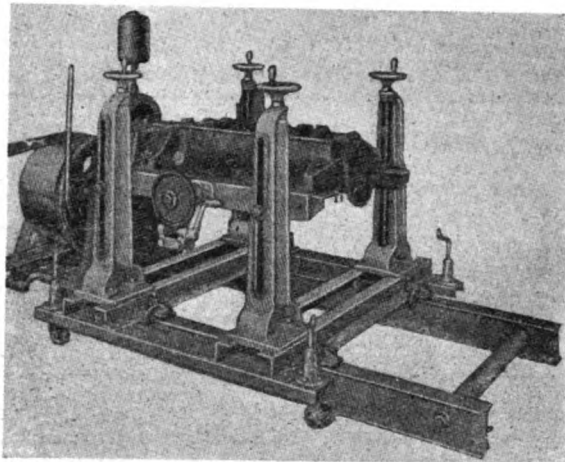
This is a combination dash-lamp and plug socket. It has a socket into which a trouble lamp, cigar lighter, or other electrical device may be plugged. The switch is conveniently located on the bracket. It is made of brass and finished in nickel. It comes complete with bulb, screws, bolts, and nuts for attaching to either wood or metal dash. Either single or double contact socket is furnished. Packed in individual cartons. Motor Specialties Co., Waltham, Mass.

BAY STATE SOCKET WRENCHES

Set No. 21 consists of a wrench which may be used as a reversible ratchet or as a solid wrench with either T or L handle; with or without extension bar. Included are a removable adapter for use when wrench is applied direct to socket, and seven sockets of the following sizes: 15/32, $\frac{1}{2}$, 19/32, 21/32, 23/32, 25/32, and 27/32 in. Price, in cardboard box, \$4.50; in water-proof bag, \$5. Bay State Pump Co., Boston 27, Mass.

UNIVERSAL BURNING-IN, RUNNING-IN AND TESTING MACHINE

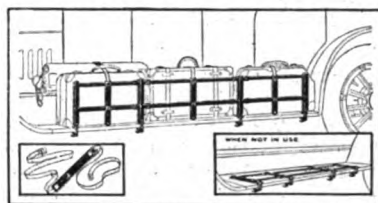
This machine is designed to accommodate all types and sizes of automobile, truck, small marine and airplane engines. It consists of a driving head and a universal engine stand. Adjustments are provided to take care of such operations as assembling, disassembling, grinding in valves, bearing reaming, burning-in, running-in and testing. The toggle expanding clutch is rated to deliver 75 hp. The pulley is 22 in. in diameter with 10 in. face. Machine may also be used for running-in rear axles. Price, \$900. Fairbanks Co., Lafayette and Broome Streets, New York City.



Universal Burning-in, Running-in and Testing Machine

MARQUETTE LUGGAGE CARRIER

This carrier fits any car, and is attached without any damage to the runningboard. When not in use it folds down flat on the runningboard. Brown web straps 60 in. long are provided to hold the luggage securely in place. These straps are detachable. The carrier is made of steel and is finished in black enamel. Price, \$6. Marquette Mfg. Co., St. Paul, Minn.



Marquette Luggage Carrier



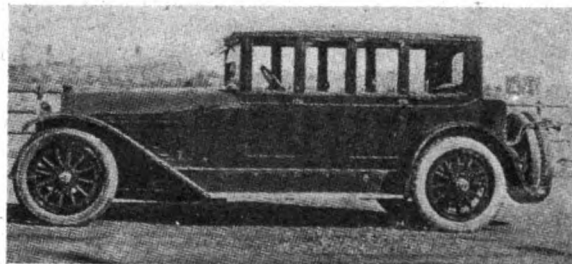
Cozine Curtains

COZINE CURTAINS

These curtains are operated by an arrangement of small pulleys and elastic cables. Each curtain may be operated independently of the others. The curtains are covered by a head lining in the top which gives them a neat appearance and protects them from dust. The curtains are adaptable to any car. Axton-Cozine Mfg. Co., Detroit, Mich.

SARGENT & HAM TOPS

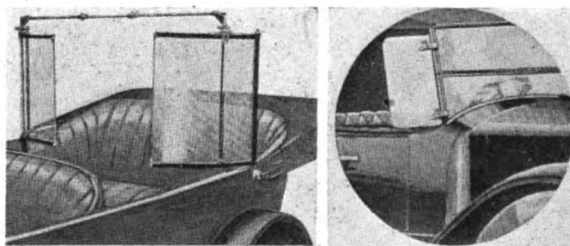
These are permanent or demountable tops designed for installation on open car bodies. The workmanship and materials are said to be of the very finest grade. All tops are warranted not to rattle. The illustration shows a four-passenger Locomobile converted into a sedan. Sargent & Ham Co., 28 Scotia Street, Boston.



Sargent & Ham Tops

MITCHELL AUXILIARY WINDSHIELDS

These are glass wings which attach to the side of the windshield. The standard fittings are for cars having wing nuts or studs on the windshield standard, and the Eureka fittings are universal. The fittings are made of bronze and are finished in nickel. The glass is held by a goose neck and wedge. Price, standard fittings, \$24.50; Eureka fittings, \$25.50. Mitchell Automotive Co., New York City.



Gemco Tonn-O-Wings

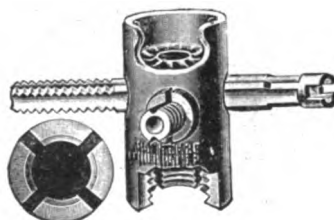
Mitchell Auxiliary Windshield

MOTORCYCLE KLAXONS

Type 6 M. C., an electrical signal, furnished either with standard handlebar or frame bracket, or with special Harley Davidson bracket. Type 3 M. C., a hand operated signal furnished with various brackets. Type 3-V M. C., same as 3 M. C. except it has vertical push-rod. Prices are \$9.50 and \$5.50, respectively. Klaxon Co., Newark, N. J.



Motorcycle Klaxons



Schrader Valve Repair Tool

SCHRADER VALVE REPAIR TOOL

A universal valve tool for repairing damage to cap washer seat at the mouth of the valve stem, the outside valve cap thread or the inside thread in the mouth of the valve stem. It may also be used for removing or inserting valve inside, and for deflating tubes. Price, 35 cents. A. Schrader's Sons, Inc., Brooklyn, N. Y.

Conferences Take the Place of Many Dealer Meetings at the Show

Big Scale Entertainments by Manufacturers Not so Numerous as in Former Years—More Attention Given to Helping Dealers Work Out Individual Problems

SHOW week has brought to the front a new development in manufacturer-dealer contacts. Banquets and big meetings, which have held the attention of the trade in past years, have been fewer and in their place have been more individual and group talks between the merchandising elements in the manufacturing and selling fields. Several manufacturers who have made a practice of big dealer meetings, dinners and luncheons gave up this idea entirely and instead brought to New York sales and service executives to help distributors and dealers work out problems peculiar to individual businesses.

Going into almost any headquarters one found in one room a manufacturer's representative talking with one dealer and in another room a similar or perhaps larger conference. And it may be said that the discussions ranged all the way from service to cost and accounting and relations with the banks.

Marmon met its dealers at a "dealer opportunities exhibit" held in the New York sales headquarters. This exhibit will be at all the principal shows.

The exhibit shows how the factory sales organization is prepared to assist in the merchandising of Nordyke & Marmon products through its advertising, sales letter, sales and service instruction, territorial analyzation and other activities in the interest of its dealers.

To some of the Marmon dealers it proved a revelation for, while they were more or less familiar with the things the factory was doing toward sales stimulation, many of them realized for the first time that they were not availing themselves fully of the opportunities that were within their reach, and they left strongly sold.

One of the features of the exhibit that was particularly interesting to visiting dealers was the Marmon plan of territorial analyzation. In this section maps showing graphically the distribution of population, property valuations, car registration, wealth distribution and road conditions in specific dealer territories were shown. The factory sales extension department is preparing to extend this service to all of its dealers upon request.

Dodge held on Tuesday one of the

largest trade meetings in the history of the industry, when 1100 dealers, from all sections of the country, lunched at one of the hotels and listened to talks on merchandising plans. The Dodge Brothers band was on hand and there were some unusual things in the way of orchestral music and decorations. Since then Dodge has maintained headquarters with a big suite of rooms, with sales and service advisors holding almost continuous conferences with dealers individually and in groups.

Oldsmobile had a big dinner, with more than 300 dealers present, Monday night, a dealer meeting at the Oldsmobile distributor's headquarters the same day and small conferences have been the rule since. Franklin, Liberty, Lincoln, Studebaker, Paige, Hupmobile, Grant and Velie held dinners and luncheons. Cadillac had 50 distributors at a dinner of the "Old Guard" but no big meeting. Sixty-five per cent of the company's distributors attended conferences through the week and the other 35 per cent are expected to meet the factory men at Chicago.



The Dealer Opportunities Exhibit visualizes for prospective dealers what Marmon has to offer in the way of merchandising assistance. This is a corner of the exhibit showing institutional data, dealer helps, etc. One of the Marmon model cars that attracted much attention in the show is in the foreground



Engineers at the Annual S. A. E. Dinner in New York

WITH more than 1000 engineers present the annual dinner of the Society of Automotive Engineers, in the Hotel Astor, was one of the largest in the history of the industry. Much interest was shown in the talk of R. E. M. Cowie, vice-president of the American Railway Express Co., who reviewed the history of the express business and its growth and put before the engineers the problem of smaller maintenance cost for vehicles. He

expressed confidence in the development of faster transportation methods through aviation and the belief that government assistance should be given in its development. Cowie also looked forward to the co-ordination between mail and express companies so that the machines could be used for both services and the utility of airplanes developed.

David Beecroft, directing editor of the Class Journal publications, was in-

troduced as the new president of the S. A. E. In his brief speech the new president made the point that the engineers of this country had accomplished a great task in taking the vehicle as developed in Europe and making an efficient production job of it. Now that this had been accomplished, he said, there remained the task of adapting the vehicle to the great uses of the world.

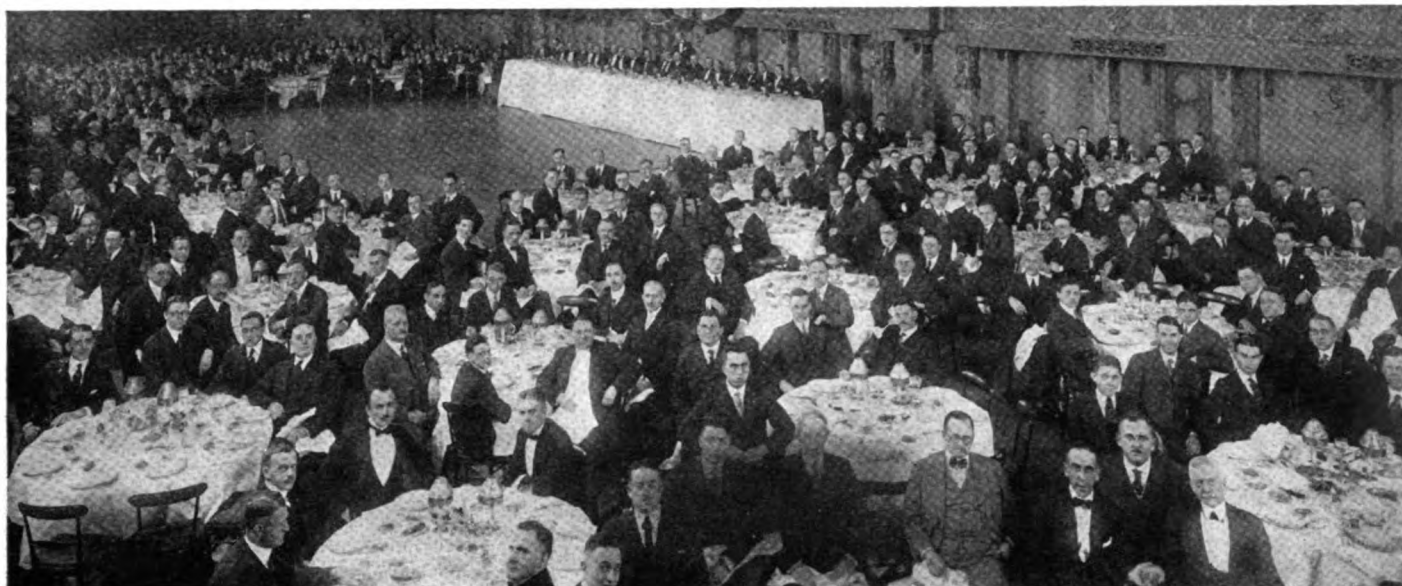
David G. Roberts, a vice-president of

the National City Bank, showed how production had been thrown out of balance during the war and even to a greater stage since the armistice. The great problem now, he said, was to restore this balance. This had been the objective of the bankers in their credit adjustment beginning almost a year ago. He said it was not only logical but right that wages should go down with living costs.

Show Week Had a Few Dealer Dinners



There were fewer big meetings than usual during New York show week this year. There were some dinners, however. Here are a few of them: (Top) Oldsmobile dealers at the Cutting-Larson Co., Monday; (Middle) Studebaker dinner, Astor Hotel, Thursday; (Bottom) Hupmobile luncheon, Commodore Hotel, Thursday



(Top) The Paige-Detroit dinner, Thursday night at the Commodore; (Middle) Racing Rubber Tire Co. dinner, McAlpin, Wednesday; (Bottom) Lexington Motor Car Co. Dealers Club, Sunday

Industry Resumes on Stronger Basis

DETROIT GETS GOING ON FAIR PRODUCTION

Majority of Leading Factories on Temporary Schedules— Sales Show Increase

DETROIT, Jan. 13—While Detroit manufacturers in most instances are attending the New York Show with the officials of merchandising departments, production in practically all factories is under way. The question of Dodge and Ford reopening still is a matter of conjecture. Unofficial reports to-day from the Dodge factory are to the effect that the big plant will swing into production soon after the Chicago Show, which means early in February. No one at the Ford plant would offer any information regarding resumption of operations, though unofficially it was said the statement that the plant would not open before Feb. 15 stands.

Studebaker opened its second unit in Detroit Monday simultaneously with the opening of the factory at South Bend. With full resumption to-day, Studebaker starts a schedule of ninety cars in South Bend and Detroit, about 1100 men returning to work at the Studebaker Detroit plants which, added to the 400 who returned to work in Plant 5 previously, gives a force of 1500.

Continental Motors officials met Monday to discuss production plans, and from the meeting information was given out that 1500 men would be put to work Tuesday in the Detroit plant. This is about 50 per cent of the ordinary force used by Continental.

Paige to Make 35 Daily

Paige, which began taking on men last week preparatory to getting into production, now has between 800 and 1000 men working, with a production schedule of twenty-five cars a day. Orders on the books and reports from dealers, according to officials, justify announcement of a schedule increase of ten cars a day next week, with a complete increase in working force, and a week from Monday the schedule will be increased to forty-five a day.

Liberty Motor Car Co. will resume Monday with several hundred men on a schedule that will approximate 375 cars a month. Liberty reports splendid information from the dealers' field in the last two weeks, and officials at the plant feel confident that the production schedule will be increased steadily until late spring, when it is believed the factory will be on a basis of pre-war normal conditions.

Scripps-Booth is operating with about

250 men, building enclosed cars chiefly on a schedule of about 20 per cent of normal operations, or approximately 250 cars a month. This schedule will be increased to 25 per cent later this month, and by Feb. 1 it is hoped to have the factory running on a 50 per cent basis, with a full production schedule March 1. Scripps dealers, according to President Sarver, feel that the bottom has been reached and they are now moving upward, with prospects for gradual steady improvement in demand. The actual orders on hand and the reports on prospects from dealers are the basis on which the present production schedules have been outlined, and orders to parts makers in line with the schedules fixed have been sent out.

Maxwell, Chalmers 25 Each

Both Maxwell and Chalmers plants began building cars Monday on a schedule of twenty-five cars in each plant daily. About 375 men are at work in the Maxwell-Chalmers plants. It is the plan of the officials to increase this schedule beginning Feb. 1.

Hupp Motor Car Corp., which has been on a schedule of thirty-five cars a day since Dec. 1, now is building fifty cars, with a slight increase in the working force, and will continue that schedule throughout this month. Good reports on prospects are being received from Hupp dealers, justifying the fifteen per day increase in the present production schedule. Hupp has about 800 men working.

Cadillac swung into production Monday, but no information could be secured as to the production schedule or the number of men employed. Prior to the shutdown for the holidays Cadillac was building on a schedule of around 2000 cars a month with a force of more than 2000. It is known, however, that Cadillac had a large surplus, and unofficially it is stated production will be held down to about twenty-five cars a day for the time being.

Oakland Tries for 100 Daily

Oakland Motor Car Co., which had planned to reach a production of 100 cars a day, still is behind that schedule, according to W. H. Maston, assistant general manager, who declined to say exactly what the daily output is. He intimated, however, it was around seventy-five cars a day and said the factory was employing about 33 1-3 per cent of the regular working force. The present output, Maston said, would be maintained until the demand justified an increase.

Olds Motor Works is turning out thirty-five cars a day of the new Four, five more than the schedule set at the beginning of the year. Olds has between 700 and 800 men at work to-day, having begun taking on men preparatory to the swing into production.

(Continued on page 45)

LOAN TERMINATIONS BRING NEW TROUBLES

Many Obligations to Banks and Creditors Due—Co-operative Spirit Shown

NEW YORK, Jan. 17—Notwithstanding the easing of credit and the improvement in the general situation, the next few weeks are likely to prove the most critical encountered by manufacturers in the automotive industry since the post-war readjustment began. This is due to the fact that nearly all companies have had coming due since the first of the year large bank loans and bills to merchandise creditors.

Most companies are short of cash and, as a consequence, more than one large corporation has found it necessary to ask its creditors for an extension of time. This condition is almost universal and is not by any means confined to the automotive industry. As a matter of fact, some other lines are in much worse plight.

Banks generally have assumed a constructive attitude and are willing to do anything within reason to keep the companies to which they have made loans moving along as going concerns rather than take action which might precipitate receiverships with a consequent shrinkage in assets. It is realized that few companies are in a position to pay all their obligations at this time.

A similar stand is taken in most cases by large merchandise creditors. They feel that if receiverships and involuntary bankruptcy petitions are avoided, they will be infinitely better off than they would be if the affairs of their creditors were placed under the direction of the courts. This means that appeals for extension of time on loans and bills are being received with sympathetic interest. In almost every case where it can be shown that the companies would be solvent under normal conditions, and there are innumerable cases of this kind, the accommodation asked is being granted.

Loans Imply No Weakness

Manufacturers and banks are a unit in feeling that no stigma attaches at this time to requests for extension of time. Almost everyone is in the same boat. For that reason less significance than usual should be attached to meetings of creditors. In most cases they are being called by the companies themselves for the protection of creditors and in the hope that some amicable plan can be agreed upon to carry them through the crisis.

(Continued on page 45)

N. A. D. A. Prepares for Business

"BACK TO SELLING" CONVENTION SLOGAN

Concessions on Railroad Fare Expected to Bring 35,000 Dealers to Chicago

ST. LOUIS, Jan. 17—"Back to Selling" will be the war cry of the 35,000 automobile dealers of the country in 1921. Harry G. Moock, general manager of the National Automobile Dealers Association, has arranged the 1921 program of the dealer convention to fit this idea. The fourth annual convention of the association will be held in Chicago during show week, the session to extend over five days with the two big membership days, Jan. 31 and Feb. 1.

A special railroad rate of a fare and a half has been allowed persons attending the convention, and this is expected to result in a far larger representation of dealers than ever before. It is important that every dealer ask on buying his ticket for a certificate, which will be validated by General Manager Moock at the convention. On presentation of this, return tickets will be sold at half rate.

The annual "master address" of the convention will be made this year by Charles W. Nash, president of the Nash Motor Co. His subject will be the relations between manufacturers and dealers as a necessary element of the success of both. Nash came into the business as a dealer, for many years was a sales manager, and his treatment of the subject will be founded upon a thorough knowledge of proper merchandising.

Three other strong features are provided for the business sessions of the convention. E. St. Elmo Lewis, noted New York advertising expert, will discuss the relation of advertising to merchandising. Leo Peil, affectionately known as "Daddy Peil" to Chicago and hundreds of other dealers in the Middle West, will speak on his success in what dealers regard as the most highly competitive motor market in the world, Chicago. Peil is president of the Mitchell Motor Car Co. of Chicago, distributor, and has been a leading factor in the fight for better merchandising methods for years. He is president of the Chicago Automobile Trade Association.

To Show Territory Value

"Something different" in trade association talks is promised in the "team talk" of L. E. Hooker and Arthur Livingston, called "Measuring the Value of a Territory." These two men are considered the leading sales and promotion men of the Burroughs Adding Machine Co. They will show by charts, especially prepared for the dealer convention, how

OFFICIAL PROGRAM OF N. A. D. A. MEETING

ST. LOUIS, Jan. 17—The official program of the National Automobile Dealers Association fourth annual convention, as prepared by Harry Moock, general manager, is as follows:

- 10 a. m.—Saturday, Jan. 29, N.A.D.A. directors' meeting.
- 5 p. m.—Opening Chicago National Automobile Show.
- 9 a. m.—Monday, Jan. 31, Registration.
- 10 a. m.—Call to order.
- President's address, H. B. Harper, Philadelphia.
- Treasurer's address and report, F. W. A. Vesper, St. Louis.
- Secretary-General Manager's Report, Harry G. Moock, St. Louis.
- 12:30 p. m.—Luncheon, same room, "Help Yourself."
- 2 p. m.—Call to order.
- Appointment of Committees by President.
- Address, C. W. Nash, President Nash Motor Co.
- Address, L. Peil, Mitchell Motor Co., Chicago.
- 6:30 p. m.—THIRD ANNUAL N.A.D.A. TRADE FROLIC!!!
- 10 a. m.—Tuesday, Feb. 1. Call to order. Forum.
- 1. Passenger Car Division—P. H. Greer, Los Angeles, Leader.
- 2. Commercial Car Division—N. H. Cartinhour, Indianapolis, Leader.
- 12:30 p. m.—Luncheon.
- 2 p. m.—Address, E. St. Elmo Lewis, advertising specialist, New York.
- Reports of Committees.

to tell the number of automobiles a trade territory can absorb.

Other addresses will be by H. B. Harper, president; F. W. A. Vesper, treasurer, and Harry G. Moock, general manager, of the association.

A feature, which was introduced last year and which has been tried since in numerous other trade associations, the forum, will be continued this year. N. H. Cartinhour of the Cartinhour-Bowman Co., Indianapolis, Indiana distributor of Federal trucks, and president of the Indiana Automotive Dealers Association, will lead the truck division forum, and P. H. Greer, Maxwell-Chalmers, Hupmobile distributor, Los Angeles and San Francisco, will lead the passenger car forum.

Chevrolet Adds New Branch

MEMPHIS, TENN., Jan. 15—General Motors Corp. will establish a factory branch of the Chevrolet Motor Co. in the newly leased garage at Union Avenue and Somerville Street here.

DURANT TO BUILD 4-CYLINDER CAR

Former General Motors Executive Back in Industry— Fall Production Likely

NEW YORK, Jan. 15—The future of W. C. Durant, which has caused widespread discussion since his retirement from the presidency of General Motors, has been definitely settled with the incorporation of Durant Motors, Inc., at Albany. With this company he will re-enter the manufacturing field to produce a 4-cylinder car which will sell at less than \$1,000. It is expected the company will be in production by August and that eventually there will be two plants—one in the East and one in the Middle West.

The authorized stock of the company will be \$5,000,000, consisting of 1,000,000 shares of no par value. All the stock will be taken by Durant and close personal friends. It is significant that the day after the incorporation papers were filed, there was active trading in the stock on the curb market on a "when issued" basis. It was the understanding that the stock was offered for subscription at \$10 a share, but most of the trading was at between 13 and 14, and the turn-over approximated 3000 shares.

Durant made the following statement in reference to the new company:

"While I am not ready at this time to make an announcement, it will probably not surprise you to know that I am still an interested and firm believer in the motor industry, and that I am organizing a company controlled by myself and several of my good friends which will be in active operation Aug. 1. I cannot go into details regarding the corporation at this time other than to say it will bear the name of the Durant Motors, Inc., with one kind of stock, with every subscriber to the initial offering upon exactly the same basis as to price, with no commissions, bonuses or reservations to myself or associates issued for experience, ability or performance. The Durant Motors, Inc., will be incorporated under the laws of the State of New York with authorized capital of 1,000,000 shares of no par value, 500,000 shares constituting the initial offering."

Resigns G. M. C. Connections

Simultaneously with the incorporation of Durant Motors, Durant severed all his connections with General Motors by resigning from the finance committee and as chairman of the executive committee. F. W. Hohensee also resigned as a director, vice-president and a member of the executive committee. It is believed he will join Durant.

NEW YORK TAX MOVE WOULD ADD \$1,000,000

Responsibility for Maintenance as Proposed Would Mean Big Fee Increase

NEW YORK, Jan. 17—Through the placing of responsibility for the maintenance of highways solely upon motor vehicle owners, as advocated by Governor Miller and as expected to be approved by the Legislature, an additional burden of at least \$1,000,000 in taxes will devolve upon owners. This is the estimated difference between road upkeep expense and the present return from vehicle licenses.

Legislative sanction will be accorded the plan outlined by Governor Miller in his first message to the lawmakers, according to Senator Charles J. Hewitt, who has been named chairman of the Senate Finance Committee.

"A slight increase in horsepower rates on each passenger car will make up the required revenue," Senator Hewitt

said. "I also believe that motor trucks should bear their part in the contemplated increase in proportion to that saddled upon passenger car owners. Trucks have never borne their share of the motor vehicle tax."

During 1920, automobile owners paid about \$9,000,000 to the State for licenses, etc. One-fourth of this was turned back to counties, as provided by law, for county road work. About \$7,500,000 was spent by the State Highways Department in maintenance work. Maintenance for the fiscal year had been estimated at \$15,000,000.

Dunlop Suspends Till April

BUFFALO, Jan. 13—Directors of the Dunlop Tire & Rubber Co. have issued a statement announcing that "general conditions in the automobile industry are such" that they are justified in practically suspending operations. April 1 has been set as the date for resumption, although it may be earlier. The British Dunlop Co. has stated that negotiations were pending in this country for a large loan to the American company.

MAXWELL-CHALMERS DETAILS COMPLETED

Reorganization Plan for Merger Now Operative—Dealers Stocks Depleted

NEW YORK, Jan. 13—After weary months of conference and compromise, the reorganization plan which will bring about a formal consolidation of the Maxwell Motor Car Co. and the Chalmers Motor Corp. was declared operative Tuesday by the managing and reorganization committee headed by Walter T. Chrysler and J. R. Harbeck. More than 87 per cent of the outstanding stock of the two companies have been deposited under the plan, but the committee is extending until Feb. 1 the time under which deposits of stock and unsecured claims can be made without penalty. The following statement on the financial status of the new organization was made to the trade by Harbeck:

"The new company is now placed in an extremely fortunate position to face the conditions confronting the automobile industry. The net outstanding obligations of the Maxwell and Chalmers companies have been reduced, through liquidation, by approximately \$11,000,000. This liquidation has been largely through the sale of cars in dealers' hands, resulting in a reduction of the companies' obligations arising from the discounting of dealers' notes, paper, etc.

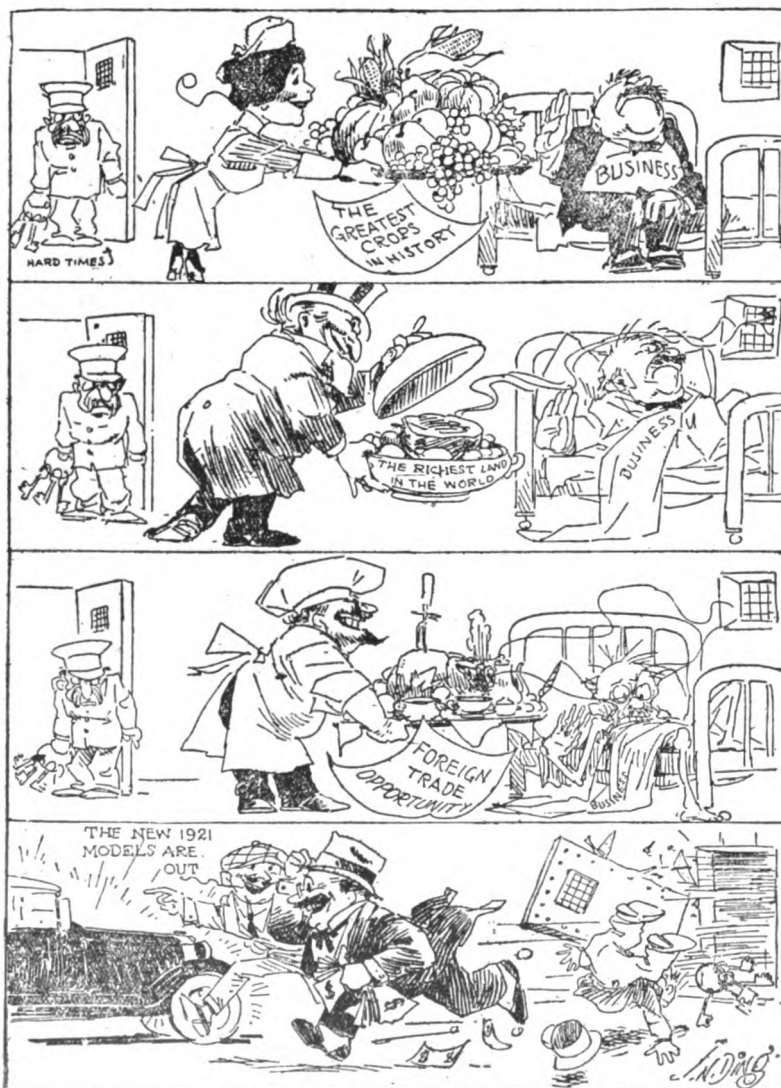
"The new company's current balance sheet shows net current assets of about \$41,000,000 after depreciation, and net current liabilities of about \$6,000,000, the ratio of current assets to current liabilities being approximately seven to one. Inventories have been substantially written down, so that the reorganized company will not be handicapped by having to take into 1921 operations losses chargeable to previous years.

"The reorganized company may be regarded as being upon a sound basis for profitable operation on the basis of reduced sale prices. During the reorganization period points of contact with the public have been more than doubled through establishment of additional selling agencies and branches, and the sales prospects are now considered to be as good as those of any company in the industry."

Dodge Estate to Widow

DETROIT, Jan. 14—The will of Horace E. Dodge, filed for probate today, leaves practically the entire estate, estimated at \$50,000,000, to Mrs. Dodge and Howard B. Bloomer, chairman of the board of the Dodge Bros. Motor Car Co., as trustees. The widow will receive the income until her death, when the estate will be divided equally between the two children, Horace E. Dodge and Mrs. Delphine Dodge Cromwell, provided they are thirty years old. If they have not reached that age the property will be held in trust for them until they are thirty.

Breaking the Hunger Strike



Darling, in the New York Tribune

ARMY TRUCK DUMPING PROBABLY DEFEATED

Military Contentions of General Staff Gain Consideration Over Economy Plea

WASHINGTON, Jan. 14—Investigation here discloses that there is little probability that Representative Anthony of Kansas will be successful in his attempt to have dumped on the public some 20,000 motor trucks owned by the War Department. He has made this proposal as a measure of economy, and it has been given serious consideration, but it has met with the strenuous opposition of the General Staff, and military considerations are likely to win the day.

Anthony has asserted that the army has many more trucks than it needs except in case of war, and it is his idea that if a military emergency arose the trucks needed could be commandeered. The answer of the General Staff to this suggestion is that if trucks were commandeered it would be impossible to service them and that the question of replacing essential parts would offer an insurmountable obstacle.

Since the beginning of the war, the army has purchased approximately 64,000 motor vehicles, trucks and passenger cars. It has disposed of 34,393, most of which went to State highway departments and departments of the Government. The trucks on hand Jan. 1 numbered 29,881. It is contended there is no surplus now, but it is expected that in the near future the army will dispose of 6850 trucks and 680 passenger cars. This would leave only 22,785 motor vehicles on hand. Of this number the National Guard of the various States will be supplied with 2479 trucks and 166 passenger cars.

Under the law the vehicles which the army does not need must be turned over to other branches of the Government. New legislation would be required before they could be sold to the public, and it is not believed probable that there will be any amendments to the law at this session.

December Shipments Drop

NEW YORK, Jan. 13—December shipping figures gathered by the National Automobile Chamber of Commerce show that 11,814 carloads of passenger cars were shipped last month and that there were 6500 drive aways. This production was 50 per cent of that for December, 1919, and exceeded that of December, 1918. It was 86 per cent of the production for November.

Parenti Schedules 5000

BUFFALO, Jan. 13—Parenti Motors Corp. has increased its capitalization from \$2,500,000 to \$11,000,000 to provide for expansion. On Dec. 29 the company moved into its new factory with 55,000 ft. of floor space and expects to have its first cars coming through to dealers in March. It plans to make 5000 in 1921.

REGISTRATIONS GAIN 1,291,096 IN YEAR

NEW YORK, Jan. 17—There are 8,887,572 passenger cars and trucks now in operation in the United States, an increase of 1,291,096 over last year. The percentage gain is 17.16 and there is now one motor vehicle for every 12.21 persons in the country. Over \$75,000,000 were collected in registration fees by the various states. The registration by States follow:

State	Total Net Registration
Alabama	74,637
Arizona	34,559
Arkansas	59,082
California	568,892
Colorado	128,951
Connecticut	119,134
Delaware	18,300
District of Columbia*	9,712
Florida†	57,000
Georgia	144,422
Idaho	50,750
Illinois	568,759
Indiana	332,707
Iowa	437,300
Kansas*	265,396
Kentucky	112,685
Louisiana	66,000
Maine	62,907
Maryland†	105,000
Massachusetts	304,631
Michigan	412,717
Minnesota*	64,312
Mississippi	64,000
Missouri†	295,817
Montana	60,648
Nebraska	223,000
Nevada	10,464
New Hampshire	34,680
New Jersey†	226,459
New Mexico	22,109
New York	651,796
North Carolina	140,860
North Dakota	90,840
Ohio	616,800
Oklahoma	204,300
Oregon	103,790
Pennsylvania	570,164
Rhode Island	50,375
South Carolina	92,818
South Dakota	122,000
Tennessee	101,852
Texas	427,634
Utah	42,604
Vermont	31,625
Virginia	134,000
Washington†	175,000
West Virginia	78,862
Wisconsin	293,298
Wyoming	23,926
TOTAL	8,887,572

*Figures for Jan. 1.

†Estimated.

‡Figures as of December 1.

Columbus Dealers Assign

COLUMBUS, Jan. 14—Voluntary bankruptcy petition has been filed in the United States court by Ryan & Hartsook, dealers in automobile supplies and accessories here. The liabilities are listed at \$2514 and the assets of the company at \$3018.

MILWAUKEE CENTERS INTEREST ON SHOW

Dealers from All Over Wisconsin Attend Annual Event— To Convene Wednesday

MILWAUKEE, Jan. 17—The thirteenth annual Milwaukee show, which opened to-night in the Auditorium, is not alone a notable event, from the standpoint of forming the principal agency to effect a revival of consumer demand for passenger cars, but as a convention of the dealer trade of Wisconsin. While the annual show always has attracted from 75 to 80 per cent of dealers throughout the State, the formation last fall of the Wisconsin Automotive Dealers Association makes it possible for the first time to put the annual winter show congregation upon a thoroughly organized basis as a convention rather than merely a gathering.

The show is again under the auspices of the Milwaukee Automotive Dealers Association and the management of Bart J. Ruddle, executive secretary and manager. William F. Sanger, Franklin dealer, is chairman of the show committee. As usual, the show consists of three divisions, namely, passenger cars, motor trucks, tractors and equipment, and the tires and automotive equipment. There are 70 exhibitors of passenger cars; 39 motor truck dealers and nearly 100 tire and equipment exhibitors. The entire main floors and basement floors, equivalent to more than 80,000 sq. ft., are in use.

A special structural steel mezzanine floor, installed in the main arena a year ago, is again used to accommodate passenger cars. The overflow is handled in Machinery Hall in the basement, and in Kilbourn, Jureau and Walker Halls.

The convention of the Wisconsin Dealers Association will be held Wednesday with at least one session on Thursday. Some of the most noted authorities in the automotive industries have been invited to address the convention. The show, as well as the convention, is recognized as one of the principal ones on the calendar, as the Milwaukee show is not a local affair but embraces the entire territory of Wisconsin and the upper peninsula of Michigan.

Templar Gets War Money

CLEVELAND, Jan. 13—The financial condition of the Templar Motor Co. has been improved materially by the settlement of the company's claim for war work against the United States Government. The claim was settled for approximately \$650,000 under the Dent act and about all of the money has been paid.

The original claim was for \$1,000,000 and the settlement is regarded as an equitable one.

The settlement puts considerable cash into the company's treasury which will be of assistance in carrying the present inventory and in manufacturing cars during the winter months for spring production.

N. A. C. C. FINDS PATH OF INDUSTRY EASIER

No Atmosphere of Gloom at Annual Dinner — Sisson Talks on Finance

NEW YORK, Jan. 12—Nearly 700 representatives of the automotive industry, most of them passenger car makers and officers of their companies, attended the twenty-first annual dinner of the National Automobile Chamber of Commerce which was held at the Commodore last night. There was no atmosphere of gloom, but rather the reverse. The diners seemed to feel that the worst is over.

"I believe the tide has turned," was the smiling declaration of Edward R. Tinker, vice-president of the Chase National Bank and one of the leading automobile bankers of the country. He was one of the dominating factors in the reorganization of the Maxwell and Chalmers companies and has complete faith in the future of the industry.

"Things aren't so — bad as they have seemed," declared Col. Charles Clifton, president of the N. A. C. C. and one of the "grand old men" of the industry, in his opening remarks as toastmaster.

The note of confidence which permeated the show dominated the dinner. The men who attended were a bit more serious than they have been some other years, but the seriousness was born of a determination to succeed rather than discouragement. It was significant that a score of the most prominent automobile bankers in the city were interested guests.

Francis H. Sisson, vice-president of the Guaranty Trust Co., who discussed the economic situation from the viewpoint of a banker, declared the most critical of the post-war readjustments have been passed, although many more must yet be made. The most important of these, he said, is the adjustment of retail prices to declining wholesale prices and the costs of production to present purchasing power.

"The adjustment of production costs will consist chiefly of wage readjustments," he said, "although increased efficiency and decreased margins of profit will play their part. The laborers who profited most from the ever-soaring wages during the war and for some time after will feel the curtailment first and most, but they should be in a better position to bear it than their less fortunate fellow-workers.

Underconsumption Trade Obstacle

"We are not in the throes of overproduction, but merely temporary underconsumption. And it is significant, in this connection, to note that when goods are offered for sale at retail prices which the public believes to be fairly commensurate with prevailing wholesale prices and cost of production they are eagerly bought. Despite the materially lessened purchasing power in agricultural sections, occasioned by the precipitate decline in the price of farm products, and in certain industrial sections, because of closed plants or the part-time operation of factories and reductions in wages, there is still a tremendous buying power and always will be.

REPORT FORD TO SEEK \$100,000,000 CAPITAL

NEW YORK, Jan. 12—Financial circles in this city have been deeply interested this week in circumstantial reports that Henry Ford proposes to offer to the public in the near future an issue of \$100,000,000 participating 8 per cent preferred stock of the Ford Motor Co. The stock would participate in the earnings of the company up to 12 per cent, it is stated, but would have no voting power.

Ford does not intend to offer any part of the stock to the banks, it is said, but intends to sell all of it to the public. He is reported to be confident that he would have no difficulty in disposing of it to the public and that the offering would be over-subscribed quickly.

Although official confirmation of the report is lacking, bankers here are inclined to believe it is true.

"The producers and merchants who persist in holding their goods for prices that the public will not pay are courting disaster and preparing to swell the number of commercial failures. They have not learned the elemental rule of successful merchandising that profits come from turning over capital. They are endeavoring to ignore the inexorable law of supply and demand.

"As on a memorable occasion when Marshal Joffre decided that France would not yield another foot of ground and determined that the enemy should not pass at the Marne, the American people have reached the point in their post-war economic readjustments where they are called upon to stand firm, to stop retreating and go forward. The present hour calls not so much for better conditions as it does for stronger courage; the existing situation requires less confusion, and more confidence."

C. G. SPRING ACQUIRES UNITED STATES BUMPER

KALAMAZOO, MICH., Jan. 13—The C. G. Spring Co. of Kalamazoo has purchased the assets and business of the United States Automobile Bumper Co., Chicago, and will move the industry intact to this city, doing all manufacturing here. The addition of this line to the present product of the plant will not require any extended layout for buildings or equipment, at least not for the time being.

Another step in the expansion of the C. S. Spring Co. is the announcement that the concern has opened branch service and repair stations in Detroit and Chicago. The Detroit station is on Woodward Avenue, near the Cadillac plant, while the Chicago branch is at 3021 Michigan Avenue. They will specialize in repairs to springs and replacements, also in the installation of the new type bumpers. These stations will be under the supervision of D. M. Short, who was associated with Girl during the latter's connection with the Perfection Spring Co.

M. A. M. A. CONFIDENT TRADE TIDE TURNED

Success of New York Show Gratifying—E. H. Broadwell New President

NEW YORK, Jan. 17—Directors of the Motor and Accessory Manufacturers Association at an organization meeting following the annual session of the members, elected E. H. Broadwell, vice-president of the Fisk Rubber Co., as president, to succeed Charles E. Thompson, president of the Steel Products Co., who had served two terms.

Other officers elected were: First vice-president, W. O. Rutherford, vice-president of the B. F. Goodrich Co.; second vice-president, A. W. Copland, president of the Detroit Gear & Machine Co.; third vice-president, H. L. Horning, secretary and general manager of the Waukesha Motor Co.; treasurer, L. M. Wainwright, president of the Diamond Chain Co.; secretary and assistant treasurer, G. Brewer Griffin; general manager, M. L. Heminway.

Two new directors were elected to the board to take the place of Christian Girl and E. W. Beach. They were F. C. Glover, vice-president and general manager of the Timken Detroit Axle Co., and H. L. Horning. Other directors besides these two and the officers are C. E. Thompson, retiring president; J. M. McComb, vice-president of Crucible Steel Co.; G. W. Yeoman, treasurer of Continental Motors Corp.; C. H. L. Flinterman, vice-president of Detroit Pressed Steel Co., and E. P. Hammond, president of Gemmer Manufacturing Co.

The annual gathering of the association this year was one of the most successful ever held and a large number of new members were elected. It has been demonstrated that the legal and credit departments are of special value to members, and this work is steadily increasing in importance. The work of Sidney S. Meyers, the general counsel, has expanded to such an extent in the past few months that it has been found necessary to add materially to his staff of assistants. The efforts of the credit department are along constructive lines and every effort is being made to save companies which are solvent but hard pressed for ready cash.

Divisions of Industry Co-operate

The parts and accessory makers were much gratified by the results of the New York show and are as confident as the vehicle manufacturers that the tide has turned and that business will improve from now on, although the upward trend will be gradual. It is significant that the relations between car and parts manufacturers are becoming more cordial and that they are co-operating to a greater degree than ever before. George M. Graham, sales manager of Pierce-Arrow, showed the community of interest in an interesting speech.

RUBBER ASSOCIATION TO EXTEND ACTIVITY

*Export and Publicity Departments Recommended —
Harry T. Dunn, President*

NEW YORK, Jan. 13—Harry T. Dunn, president of the Fisk Rubber Co., was elected president of the Rubber Association of America at the annual meeting of the directors here. He succeeds Homer E. Sawyer of the U. S. Rubber Co., who has served two terms. The other officers chosen were: First vice-president, F. A. Seiberling, president of the Goodyear Tire & Rubber Co.; second vice-president, Horace DeLisser, chairman of the board of the Ajax Rubber Co.; secretary and general manager, A. L. Viles; treasurer, Wm. C. Cox. Prior to the meeting of the directors the organization elected five directors, who were: Seiberling, Dunn, DeLisser, William O'Neill, vice-president of the General Tire & Rubber Co., and F. R. Henderson, president of F. R. Henderson Rubber Co.

The association referred to the directors' power to act on the recommendation of the general manager that an export department and a publicity department should be added to the activities of the association.

If the export department is established, as it undoubtedly will be, it will help to solve problems in connection with the tire industry in foreign markets, notable among which will be educational work in the interest of the straight side type of tire equipment as contrasted with the clincher type, which is being vigorously promoted by manufacturers in Europe.

The annual dinner of the association was held Monday night in the grand ballroom of the Waldorf Astoria, and approximately 875 representatives of all branches of the industry were present. The attendance was considered remarkable in view of the industrial conditions which now prevail. Homer E. Sawyer, the retiring president, presided as toastmaster, and the speakers were P. E. Blondin, Postmaster General of Canada; Representative Simeon D. Fess of Ohio, and Rev. Nehemiah Boynton. The dinner committee was composed of Horace DeLisser, A. W. Warren and C. W. McLaughlin.

Job Seekers Throng Akron

AKRON, Jan. 14—The publication of false reports in many of the papers, caused several thousand laborers to come here searching for work in the rubber factories. The increase in production is actual in that the present forces are gradually being restored to normal working hours. They are not going to put on any more men until the hours are back to full time. The city is trying to prevent the influx of hundreds of floaters who are hunting jobs by sending out word that Akron has enough unemployed without increasing its forces. The charity organizations have appropriated \$55,000 for the immediate relief of the city's present 20,000 unemployed.

BEECROFT INDUCTED AS S. A. E. PRESIDENT

NEW YORK, Jan. 17—David Beecroft, directing editor of the Class Journal papers was inducted into office as president of the Society of Automotive Engineers at its annual meeting here last week. He succeeds J. G. Vincent, vice-president of engineering for the Packard Motor Car Co., and is the first man not an engineer ever to head the organization.

Beecroft has devoted much of his time for several years past to the building up of the S. A. E., which now has a membership of more than 5000. He has been especially prominent in the effort to promote standardization of various units which go into the manufacture of automotive vehicles.

He began with Motor Age in 1905 and became directing editor of the Class Journal group: Motor World, Motor Age, Automotive Industries, Commercial Vehicle, El Automovil Americano and Distribution & Warehousing.

CLEVELAND TO ATTRACT DEALERS OF FOUR STATES

CLEVELAND, Jan. 14—The Cleveland automobile show is rapidly assuming the position of an Ohio institution. Each year the show has assumed a new importance in the Ohio trade, and this has been true in 1921.

The annual trade rally to be held on Monday of show week this year is certain to set a new attendance record. There will be more retailers from Ohio cities than has attended these gatherings in the past, while reservations have been made for dealers in West Virginia, Kentucky and Indiana.

Trade conditions have put a new importance on the show, which opens here Jan. 22 and continues through to Jan. 29. Retailers and salesmen have come to realize that more persistent efforts are needed to make business go, and they look to the show for ideas and sales policies.

Fred H. Caley, secretary of the Cleveland Automobile Club, and show manager, says the interest this year on the part of manufacturers and dealers assures a record in exhibits and general all-round hustling.

McGraw Offices Moved

CLEVELAND, Jan. 17—General offices of the McGraw Tire & Rubber Co., and Cleveland sales room, are now located in the Cook Building. Dexter G. Hathaway is now in charge of Cleveland district sales, coming to the company from Victor-Springfield. J. C. Cary has also been added to the sales staff of the company, his headquarters being at the Boston office.

IMPLEMENT DEALERS WIDEN MEMBERSHIP

*Mississippi Valley Association
to Include Vehicle and Hardware Men on Rolls*

ST. LOUIS, Jan. 14—More than 450 members of the Mississippi Valley Implement Dealers Association attended the fourteenth annual convention of the organization just held at the Planters Hotel in St. Louis. The annual election of officers resulted in the naming of Frederick P. Watson of Mt. Vernon, Ill., as president for the 1921 term, and the following as members of the new board of directors: L. A. Glover, Jonesboro, Ark.; G. A. Erkins, Clarksdale, Tenn.; George Schneider, St. Peters, Mo., and G. B. Seagrave, Osceola, Ark. Frank B. Goodwin, Kirkwood, Mo., was renamed secretary by the board by a virtually unanimous vote.

The name of the organization was changed to that of the Mississippi Valley Implement, Vehicle and Hardware Association, and the constitution and by-laws were amended so as to permit the inclusion in membership of dealers who retailed one or more of the lines. This action came as the result of the classification of the membership, which proved that 92 per cent handled implements, 73 per cent handled vehicles and 82 per cent handled hardware.

According to the retiring presiding officer, Henry F. Woerther of Baldwin, Mo., the most important problems of the past year which promise to affect matters of the immediate future are power farming, elimination of deposits on tractor contracts, standardization of many vital spare parts common to similar implements and vehicles of various manufacture, one line contracts of motor and other vehicles, increased freight rates, c. o. d. shipments of repairs, well defined and exclusive territories, and closer mutual understanding with heads of various farm bureaus in States covered by the association.

Stanley M. Sellers, Lebanon, Ohio, past president of the Ohio Implement Dealers Association, addressed the convention on "Selling the Country Community to Its Own People." William McChesney Martin, chairman of the board of the Federal Reserve Bank of St. Louis, spoke on the subject of "Financing Agricultural Trade Through the Federal Reserve Banks." Members of the association visited the various implement and tractor manufacturers and dealers during their stay in St. Louis, which was again named as the convention city for 1922.

Rolls-Royce at Capacity

SPRINGFIELD, MASS., Jan. 14—The American works of the Rolls-Royce company have reopened here on a full production schedule. About 600 workers are employed and more are being added as required. Chassis production has started, the first models being now on test.

SOUTHERN BUSINESS GAINS IN NEW YEAR

Industrial Plants Resuming Operations After Lay-off— General Revival Near

ATLANTA, Jan. 14.—The first few days of the new year have brought about some improvement in sales in this part of the country, according to several Atlanta dealers and distributors, with every indication that in the next thirty days the industry will begin a return to normal which will materialize with the coming of spring. Some dealers express confidence that the normal condition will be here by mid-spring, while there are others who believe that the full period of readjustment will not have passed before late summer or fall. Nearly all dealers, though, report that they already note increased interest on the part of the public, and several report they have made some good sales since the first of the year.

S. C. Porter of the J. W. Goldsmith Co., dealers for Hudson and Essex, stated that sales the first week of 1921 would compare favorably with the best period during the spring of 1920; he stated there was a decided improvement in the used car situation.

Black & Maffett, Dodge Brothers distributors, reported the first week of the year the best they have experienced since early last fall in point of sales.

H. W. Havens of the William A. Estaver Sales Co., Velie distributors, report the best business the company has experienced in many months.

The Franklin Motor Car Co. reported as many sales for December, 1920, as December, 1919, and business since the first of the year such as to indicate that the revival of activity is at hand.

Numerous industrial plants of the South are resuming operations after long periods of inactivity, and it is generally felt in business circles that the normal condition will be here by the spring of the year.

CHRYSLER AND KROH ON ATLANTA PROGRAM

ATLANTA, Jan. 15.—Several hundred automobile dealers and accessory dealers from Georgia are expected to attend the annual meeting of the Georgia Automotive Dealers Association, to be held here Jan. 26. Directors of the association will meet Jan. 25 to formulate plans for presentation to the members at the general meeting the following day. Sessions are to be held at the Capital City Club.

Aside from a business program of considerable importance there will be addresses by several men prominent in the automobile industry or the commercial field. A. R. Kroh will speak on "Motorization of the Farm," R. H. Martin of the Southern Oakland Co. will speak on "The Status of the Industry, Present and Future, from the Dealers' Standpoint," Walter P. Chrysler, executive vice-presi-

dent of the Willys corporation, will also address the meeting.

Since its organization in 1918, the Georgia State Automotive Dealers Association has won a reputation as one of the liveliest trade organizations in the country. It has accomplished many reforms for the automotive industry and for dealers all over the State. One of the principal features of the 1921 annual meeting will be the election of officers to serve for the coming year. Present officers of the association are W. L. Mathers of Atlanta, president; J. H. Lewis of Atlanta, A. S. Hatcher of Macon, and Tom Wisdom of Chipley, vice-presidents; R. H. Martin of Atlanta, treasurer; P. A. Megahee of Atlanta, secretary.

BALTIMORE EXPECTS BIG SATURDAY SALES

BALTIMORE, Jan. 13.—The Baltimore Automobile Trade Association is the new name of the Baltimore Automobile Dealers Association, and the new name will come into use just as soon as the legal change takes place.

Positions for what promises to be the biggest and best automobile show ever held in Baltimore have been drawn for. It will take place at the Fifth Regiment Armory, opening Jan. 22, which is a Saturday night, and coming to a close the following Saturday night, Jan. 29. Previous to this year it has been a five-day show, with dealers not being able to obtain possession of the armory until Monday morning before the opening on the usual Tuesday night. The two Saturdays are expected to be a big factor in future business to be done in the Baltimore territory during the year.

This year, also, provision is made for forty distinct booths for accessory displays. This will be the first time in many years that an opportunity has been presented to the accessory dealer to show his goods at the big show.

Fifty-one passenger car dealers have obtained space.

Tennessee Brockway Reorganized

NASHVILLE, TENN., Jan. 15.—The Brockway Motor Truck Co., Inc., of Tennessee, has reorganized and re-established new quarters. The company will be under the personal management of Stanley Miles, long resident here and for eighteen years general agent of the American Seed Machine Co. T. G. Holland, formerly of Baltimore, Md., will be vice-president; R. M. Jackson, lately connected with Nashville firms, will be secretary-treasurer. Sidney Rather will be service manager.

Revere Denies Bankruptcy

INDIANAPOLIS, Jan. 13.—The Revere Motor Co. of Logansport has entered a general denial in Federal court in answer to bankruptcy proceedings instituted against it two weeks ago by Chicago creditors. Judge Anderson set the case for trial January 18th.

TEXAS DEALERS FIND TRADE GOOD AS EVER

Elements Combine to, Make Business Steady — Crops Good and Wages High

DALLAS, TEX., Jan. 15.—Despite the financial stringency and the talk of hard times, Dallas automobile dealers found business last month as good as ever. Reports made to the trades association showed approximately five hundred new cars disposed of by the local dealers during the last month of the old year. For a winter month that is considered a good business—better, in fact, than some of the months of the summer.

The dealers declare they are not expecting any dull business during the present year. Sales are being made daily and inquiries are coming in from people who are in a position to buy. One of the Dallas dealers declared that despite the period of readjustment he expected the present year to be the best in the history of the automobile business in Texas. Other dealers are equally optimistic.

The fact that there is no hibernating cars in Texas, coupled with the construction of permanent highways, makes the motor vehicle the favorite all the year around. The demand for cars in the winter is about as great as any other time.

Another thing which makes the Dallas dealers expect good business is that there has been no scarcity of money here. The farmers have had good crops—bumper crops—and while the prices paid for his products were not as high as a year ago, what he had to buy was sold for less, and he has money. Wages have not been reduced and employees have not been laid off. The result is nearly every one is prosperous and most everyone is figuring on buying an automobile. The city sales have increased because of the boost in street car rates, and the country sales are increasing because the farmers are learning that an automobile is not as expensive as a horse and buggy.

Memphis Business Better

MEMPHIS, TENN., Jan. 15.—The weekly luncheon of the Memphis Automobile Dealers Association at Hotel Gayoso, this week, was presided over by President Steve H. Butler, and featured with honor guests in the persons of R. H. Hart, W. F. Stockwell and C. A. Noon, general counsel of the Tennessee Automotive Trades Association. In a talk on general conditions in the State organization in recent months, it was brought out that business conditions in the eastern section of Tennessee are much more active. More than 100 new members from among the country dealers have joined membership in the State association since the middle of December.

Dealers are all busy preparing for a share in the spring business.

CHIEF FARM EXPERTS ON TRACTOR PROGRAM

Motorization Possibilities and Problems to Be Discussed in Detail at Columbus

COLUMBUS, Jan. 17—The most comprehensive educational program ever arranged for a large gathering of American farmers will be the main feature of the coming National Tractor Show in Columbus, Feb. 7 to 12, inclusive. Farm problems of every kind and every phase of tillage of the soil will be touched upon during the show in the educational program. Methods of handling, caring for and repairing farm machinery will also be touched upon at the meetings.

The men selected to explain the various farm questions are authorities in their lines. They come from the various colleges and agricultural schools of the country and comprise the leading thinkers in their departments. One of the speakers will be F. I. Mann of Gilman, Ill., a brother of Congressman Mann, on "Soil Conservation"; Hammond Olney of St. Joseph, Mo., editor of *Power Farming*, will speak on "Adapting the Farm and Farm Business to Power Farming."

"Factors Which Determine the Type and Size of Tractor to Be Purchased" will be explained by I. W. Dickerson, Charles City Iowa, editor of the *Agricultural Engineer*. "The Modern Trend of Tractor Design" is the subject to be treated by J. B. Davidson of the Iowa State College, Ames, Iowa. Prof. O. W. Sjogren of the College of Agriculture of Lincoln, Neb., will talk on "Ignition Troubles and Their Remedies." "Tractor Hitches" will be explained by Prof. Daniel Scoates of A. and M. College, College Station, Tex.

Two Ohio State University professors will be on the program. They will be G. W. McCuen and F. W. Ives. The former will lecture on "Lessons to Be Learned from a Tractor Survey in Ohio," and the latter on "Housing the Tractor and Tractor Tools."

Perdue University is sending Prof. William Aikenhead of the College of Agriculture to lecture on "Tractor and Belt Power," and Pennsylvania State College is sending Prof. R. U. Blasingame to talk on "Advisability of Purchasing Tractors and Tractor Tools in Community Groups." F. W. Duffee, a former student at the Ohio State University, will explain "Laying Off the Field for Plowing." Practical farmers will also be on the program and it is planned to have general round-table discussions of all questions pertaining to farming and tractors.

Show Everything in Motors

BUFFALO, Jan. 14—Everything in motors and to which the motor is applicable in the home and in the industries, on land and on sea and in the air, will be among the exhibits at the first annual motors and sportsmen's show to be con-

ONE SALE PER MAN SOUGHT BY FRANKLIN

NEW YORK, Jan. 15—Franklin, which reports approximately 1000 deliveries of cars in December, has started a campaign for the sale by every dealer and every salesman of one car in January. At the Franklin luncheon during the show, attended by dealers from all sections of the country, the "car a man" idea was launched, and it was stated that if every dealer individually and every dealer's salesman closed an order the month's sales would run above 1500. The new Franklin front end, with the "dummy" radiator, was well received by visiting dealers at the show.

ducted by the Automobile Club of Buffalo, April 11-16, 1921, at the Broadway Auditorium.

Motor accessories and a wide range of exhibits of particular interest to the sportsmen afield will combine with other features to make the coming exposition one of the largest and most comprehensive of Buffalo's annual affairs.

DALLAS TO HOLD FIRST ENCLOSED CAR SHOW

DALLAS, TEX., Jan. 14—The first annual enclosed automobile show of the Dallas Automobile Trades Association will be held the second week in February, according to the announcement of J. A. Connell, president of the organization. W. G. Langley, Roy Munger and F. E. McLarty have been named a committee to make all arrangements for the show. President Connell declares the time has passed when the enclosed car in Texas is a winter vehicle and that now many enclosed cars are being used the year round. He declares the number of these cars increase from year to year, and that the Dallas association must show its customers what the market has in that line.

According to present arrangements, the latest models of all enclosed cars will be on display for a couple of days here while the trade from all north Texas inspect them. President Connell suggested and his suggestions are to be carried out, that some of the products of the big shows of Chicago and New York be brought to Dallas for the occasion and that expert salesmen and demonstrators be employed.

The building to house the show will have suitable space for dancing, and the dealers expect to lend a society tinge to the event. There will be dancing at several stages of the show, and there will be tea and other refreshments served from time to time.

Later in the season the regular annual show of the Dallas dealers will be staged. This will probably take place at the fair grounds.

INDIANAPOLIS NAMES OFFICERS FOR YEAR

Resumes Semi-Monthly Meetings and Arranges for Speakers—Shows Successful

INDIANAPOLIS, Jan. 14—At a meeting of the board of directors, following the general meeting of the Indianapolis Automobile Trade Association, the following officers were elected to serve one year terms: N. H. Cartinhour, president; H. C. Lathrop, vice-president; A. W. Hutchison, secretary, and George O. Wildhack, treasurer. John B. Orman was retained as active manager of the association.

The association resumed its semi-monthly meetings, Jan. 14, and was addressed by P. C. Chamberlain, who is making a lecture tour under the auspices of the National Automobile Dealers Association.

The next meeting will be held Feb. 1 and will be addressed by Harry B. Smith, Adjutant-General of Indiana, who will talk on the benefits of a State constabulary.

Directors elected at the annual meeting were N. H. Cartinhour of the Cartinhour-Bowman Co., and L. L. Banford of the Stewart Products Service Station, on the "Regular" ticket, and Andrew W. Hutchison of the Detroit Electric Sales Co. on the "Members" ticket. Fifty-one members of the association were present.

The report of the secretary showed that the association has 76 members on its roster, and that the body has had an active year. It also showed that both the spring and fall shows, of the 1920 season, were very successful. Over \$40,000 was expended on the show building during 1920, on a heating plant, extension of the electric lighting system and a cement platform from street to entrance of the building.

INSURANCE MEN FORM TO AID THEFT FIGHT

CLEVELAND, Jan. 14—The insurance men of Cleveland have organized the Automobile Underwriters Association to co-operate with the police department in the apprehension and prosecution of the ever increasing number of automobile thieves.

A. W. Henry of the Bingham & Douglass Co. is president of the organization, C. A. Benner of the Aetna Casualty is vice-president, and S. J. Horton is secretary and treasurer. Headquarters are opened at 304 Chamber of Commerce.

The organization proposes to collect data on cars stolen, to assemble the names of automobile thieves and to maintain a bureau of information for both the police and owners. Later, as the body grows, legislation will be framed and offered in the general assembly. The measure will seek to throw greater protection from thieves around automobile owners.

TEXAS LEGISLATURE TO REVISE CAR LAWS

Anti-Theft Measures and Provision for Five-Year Licenses Are Outlined

AUSTIN, TEX., Jan. 13—When the Legislature meets in regular biennial session this month, a bill will be introduced regulating the registration of motor vehicles and their operation upon the public highways of the State. The measure has been drafted by the State Highway Department. It includes in one legislative act the essential parts of the three or four existing laws on the subject, and at the same time incorporates a number of very much needed amendments to the existing laws.

One new feature incorporated in the bill requires satisfactory evidence of ownership as a prerequisite for a motor vehicle license. This feature, it is believed, will make it almost impossible to register a stolen car and will, consequently, make it impossible to sell a stolen car to an unsuspecting purchaser.

Another provision more clearly defines a "commercial" motor vehicle and simplifies the present schedule of fees to be paid for the registration of commercial motor vehicles, and also requiring the payment of a license fee by owners of tractors and trailers. Under the present law the collection of a license fee on tractors and trailers cannot be enforced.

An amendment providing for the issuance of a new series of license numbers every five years is included in the law. This provision replaces the present provision providing for the so-called permanent system, and is a compromise between the permanent number system and the annual system that is now in vogue in nearly all the States.

An amendment to safeguard the expenditure of the portion of the license fees spent under the direction of the commissioners courts has been included. This amendment will make certain the proper maintenance of a road that has been constructed with State or Federal aid.

A special provision prescribes a severer and more certain penalty against persons guilty of the theft of a motor vehicle, and repeals the suspended sentence law in so far as it would apply in favor of a thief convicted of stealing an automobile.

The bill does not propose any changes in the part of the existing law that relates to the creation of the Highway Department and the expenditure of State and Federal aid in road construction.

Georgia Road Work Discussed

ATLANTA, Jan. 15—The annual banquet and meeting of the Georgia State Automobile Association, held at the Capital City Club in Atlanta was given over entirely to addresses by state officials and a general discussion of highway con-

struction work that has been carried on in Georgia the past year, and that is planned for 1921. Addresses on this subject were made by Dr. Charles N. Strahan, chairman of the state highway board, W. R. Neel, state highway engineer, and Governor-elect Thomas W. Hardwick. The 1921 program with Federal aid will result in the completion of all important highway links in the State.

CONNECTICUT OUTLINES HIGHER VEHICLE FEES

HARTFORD, CONN., Jan. 13—In order to double the revenue obtained from car registration, that is to raise \$3,000,000 instead of \$1,800,000 from this source of highway maintenance, State Highway Commissioner Charles J. Bennett recommends that passenger cars pay 75 cents per horsepower instead of 50 cents at present, and that trucks be taxed from \$25 to \$600, according to size. All this is covered in the commissioner's annual report to the governor. "It seems fair," says the commissioner in his report, "that the motor vehicle, which uses the road, should pay to a large extent for the ordinary replacements of surface, the removal of snow and the ordinary safety devices, such as railings, signs and signals. The commissioner also recommends that steps be taken to provide for the collection of license fees from foreign trucks.

OKLAHOMA CITY OPENS EXCLUSIVE TRUCK SHOW

OKLAHOMA CITY, Jan. 18—The motor truck dealers of this city opened to-day the first exclusive motor truck show ever held in Oklahoma, for four days and nights. For the past four years the passenger car and truck distributors located here have staged a "combination" show. With developments in the oil fields and highway improvements the truck market here is considered good.

The motor truck show committee consists of H. J. Succop, G. M. C. Truck Co., chairman; G. M. Head of the J. Carl Finch Motor Co., Day-Elder and Commerce distributor, and Bart L. Russell of the Earl M. Stapleton Co., Duplex distributor. George W. Woods is manager.

Wisconsin Garages Merge

STURGEON BAY, WIS., Jan. 14—The Lakeshore Motors Co. has been incorporated at Sturgeon Bay, Wis., with \$25,000 capital as a consolidation of numerous garage and service station properties with the Motor Inn as a nucleus. The new concern will represent the Studebaker, Cletrac, Oneida truck, Oliver tractor implements, Hayes sprayers and other automotive lines, in the territory embracing Door, Kewaunee, Manitowoc, Brown and Calumet counties. H. W. Ulsparger is president, and T. Frank Caffee, secretary-treasurer and general manager.

YOUNGSTOWN ENJOINS TRUCK LIMIT ACTION

Court Restrains Enforcement Awaiting Technical Proof of Bridge Carrying Capacity

YOUNGSTOWN, OHIO, Jan. 14—An injunction against the county commissioners' enforcement of recently established gross weight limits for motor trucks on main market highways bridges was granted in Common Pleas Court, Jan. 7, on petition of the Albert Buerhle Co., the Youngstown Automobile Dealers Association and others. The limits set were a maximum of eight tons gross on one bridge and as low as five tons, affecting seventeen bridges and all main market highways.

Educational work was attempted to bring the commissioners to a more considerate viewpoint and to cause them to take measures for reconstruction of bridges to an adequate weight limit. The State law provides a maximum of twelve tons gross. The commissioners have remained unmoved by appeal. The Youngstown Automobile Club joined hands with the dealer association, but could not get favorable attention.

The injunction granted was based on representation that the commissioners were in violation of statutes and that they had not made a technical survey to determine the weight-carrying capacity of the bridges. The commissioners have caused arrest and assessment of fines against twenty-one truck operators.

A. M. Henderson, counsel for the Youngstown Automobile Dealers Association, asserted that he has information that the action of the commissioners was taken for the sole purpose of ruling heavy duty trucks off the highways. The weight limits placed by the commissioners eliminated 3½, 4 and 5-ton trucks from operations outside the city of Youngstown.

This would prove an exceptional hindrance to a highway program that calls for expenditure of \$500,000 in highway improvement in this and adjoining counties this year. Youngstown is the center for supplying motor vehicle equipment to the road builders and for supplying of road materials. If the heavy duty trucks were eliminated, the road builders would be required to use trucks of lesser capacity, increasing the costs and the construction time.

If the commissioners do not, within a reasonable time, start reconstruction of the bridges to bring them to the limit fixed by statute, the dealer association is prepared to start legal action to compel them to.

To Build New Light Car

NEW YORK, Jan. 14—Major Victor W. Page has been named president and chief engineer of the Victor Page Motors Corporation, formed to manufacture and market a new light-weight car. It will be equipped with a 4-cylinder air cooled engine of his design.

TIME PAYMENT SALES HALF OF BUSINESS

Questionnaire by Acceptance Corporation Gives Percent- ages—Farmers Most Credited

NEW YORK, Jan. 15—Statistics gathered by the General Motors Acceptance Corp., through the issuance of a questionnaire to dealers, show that between 45 and 50 per cent of all automobiles being sold in the United States to-day are marketed on some deferred payment system. This is considered the first authoritative figure issued covering this point. The replies from dealers covered sales of 149,136 cars, of which 69,729 were sold on time.

The period for which the questionnaire asked information was that from Aug. 1, 1919, to July 31, 1920, and, therefore, included the latter half of a summer selling season the following fall, winter and spring seasons, and the first half of the succeeding summer. Selling conditions over a full yearly cycle are thereby exemplified.

City dwellers paid cash more frequently than farmers, only 44.9 per cent of urban sales being on credit arrangements while 48.2 per cent of new cars delivered to farmers were on time. On trucks 53 per cent of those sold in cities were financed while 59.9 per cent were financed of those sold to farmers. Maximum time allowed to city dwellers on deferred payment sales averaged 9.3 months and to farmers, 11.1 months. The average down payments on all deferred payment sales was 40.3 per cent of the cash selling price.

Commenting on the statistics, the corporation asserts that by more intensive use of deferred payment facilities the automobile industry may be able to increase its sales by approximately 25 per cent. This is based on the estimate by economic experts that 25 per cent of the industry's production always will be sold for cash.

Industry Resumes on Stronger Basis

(Continued from page 36)

Packard still is operating about 50 per cent of its force, with a production schedule around twenty-five daily, chiefly the new Single Six.

Buick resumed production Monday and will build about 250 cars daily until the demand justifies an increase in the schedule.

Chevrolet, which resumed production last week, now is operating on a schedule of 100 a day.

Plants that resumed this week are following the policy of those which opened Jan. 3 in so far as wage schedules are concerned, and decreases ranging from 20 to 25 per cent have been put into effect in all factories. In the face of this decrease, there is ample skilled and unskilled labor obtainable and officials are

in position to pick their employees and get the cream of the working force.

Lincoln Motor Co. is operating on a schedule of ten a day with a working force of about 250. Lincoln has not been down, though, for some time, and they were producing practically no cars, the few men working being employed in the parts department. The present production schedule was entered upon last week and will be maintained indefinitely until the increased demand permits an increase.

Loan Terminations Bring New Troubles

(Continued from page 36)

A great deal of refinancing is being engineered at this time, although the negotiations have been completed in only a few cases. This applies to some of the largest companies in the industry. Important announcements along this line may be expected in the near future.

Banks have become more deeply interested in the automotive industry than they ever were before, and they are convinced that its future is thoroughly sound. That is one of the reasons why they are perfectly willing to finance any sound company to which they already have made loans. They believe that by extending further help at this time they can avert impairment of investments.

If the next few weeks can be weathered safely there is no need to fear serious casualties in the industry. Present conditions, however, make it even more dangerous than usual to rock the boat and invest with unusually sinister possibilities the circulation of reports that this or that company is in a bad way financially.

PHILADELPHIA FORMS BASKET BALL LEAGUE

PHILADELPHIA, Jan. 13—Interest has been aroused along "Motor Row" over the organization of the Automotive and Rubber Basket Ball League, comprised of six teams and representing some of the largest and best known companies of the city.

The teams will wear the colors of the following companies: Neel-Cadillac Co., United States Tire Co., Ajax Rubber Co., Foss-Hughes Co., Goodall Rubber Co., and Bill's Tire Shop.

The official opening of the new league took place Jan. 11 at Traymore Hall, when two games were played, the first between the Neel-Cadillac Co. and the Ajax Rubber Co., and the second between the United States Tire Co. and the Goodall Rubber Co.

Blair Association Formed

ALTOONA, PA., Jan. 15—The Blair County Automotive Association has been formed here for the purpose of co-operating with other organizations in road building, vehicular legislation and automobile selling. The officers are H. Atlee Brumbaugh, president; L. B. Fry, vice-president; H. G. O'Brien, secretary, and Harry Edgely, treasurer.

ROAD FUNDS EXCEED PANAMA CANAL COST

Total of \$637,500,000 Avail- able Throughout Nation— Economy to Guide Work

NEW YORK, Jan. 13—For public highways—\$637,500,000.

This is the staggering total available in the forty-eight States of the Union for expenditure this year on road construction. The total includes Federal, State and county appropriations. This amount is nearly 50 per cent more than was spent in ten years in building the Panama Canal and nearly six times as much as New York State spent on its great barge canal.

The amount is the largest ever made available in any one year for road building, and it is believed that with materials lower in price, labor plentiful and transportation normal the mileage of construction will surpass any previous mark. A quarter of the total comes out of the Federal aid fund, and this source of supply will be exhausted by the beginning of 1922 unless additional funds are provided by Congress, which is not likely at this session, which has "Economy" as its slogan.

With such an enormous amount to be used in road building, the various agencies interested in improvement of highways are actively concerned in having it expended wisely and economically. The main purpose is to have the roads built where they will do the most good and carry the most traffic. The subject of substantial and economical construction is next in importance. One of the most important factors in lower costs is found in the fact that labor is not only plentiful but cheap. Common labor for road building is available in some of the Southern States at \$1.50 a day.

Bridgeton Elects Officers

BRIDGETON, N. J., Jan. 13—The Bridgeton Automobile Association in annual meeting elected officers for the year and set the date for the sixth annual show as April 2-9, inclusive. Bad roads and weather at times of previous shows influenced naming of a later date. Charles A. Hann was made president; Albert L. Hann, secretary and treasurer; Miss Ada Davis, vice-president; Joseph W. Acton, show manager. Trustees, Miss Ada Davis, Charles A. Hann, Joseph M. Elwell, David R. Mitchell, Arthur Sheppard.

Tolon Havana President

HAVANA, Jan. 13—Samuel T. Tolon has been re-elected president of the Havana Automobile Dealers Association. With Tolon, were named Francisco Pla, vice-president; E. W. Miles, treasurer; M. T. Vallin, assistant treasurer; Enrique Hemel, secretary, and J. E. Diaz, assistant secretary. The directors are Jose G. Lopez, J. M. Martinez, Gabriel Miguez, Octavia Longa, Ramon Fernandez and Alejandro Rodriguez.

COMING EVENTS

SHOWS

Ardmore, Okla.	January	.....	Annual Automobile Show, Ardmore Automobile Dealers' Ass'n, Convention Hall, R. L. Beede, Sec'y.	Chattanooga, Tenn.	February	.....	Annual Automobile Show, Chattanooga Automotive Trade Ass'n, Sunday Tabernacle.
Pontiac, Mich.	January	.....	Annual Automobile Show, Pontiac Automobile Dealers' Ass'n, Millward Garage.	Roanoke, Va.	February	.....	Annual Automobile Show, Roanoke Automobile Dealers' Ass'n, Auditorium, W. M. Shickle.
San Francisco	Jan. 22-27	.....	Second Annual Pacific Coast Automotive Equipment Exposition, Exposition Auditorium.	Paterson, N. J.	February	.....	Annual Automobile Show, Armory.
Baltimore	Jan. 22-29	.....	Annual Automobile Show, Baltimore Automobile Dealers' Ass'n, 5th Regiment Armory, J. C. O'Brien, Mgr.	Rockford, Ill.	February	.....	Annual Automobile Show, Rockford Automobile Trades Ass'n, Shrine Temple.
Cleveland	Jan. 22-29	.....	Annual Passenger Car Show, Cleveland Mfrs. and Dealers' Ass'n, Wigmore Coliseum.	Logan, Utah	Feb. 1-3	.....	Annual Automobile Show, Cache Valley Automobile and Accessory Ass'n, N. W. Merkley, Pres.
Montreal	Jan. 22-29	.....	Annual Automobile Show, Montreal Automobile Trade Association, Motordrome Bldg.	Tampa, Fla.	Feb. 3-12	.....	Annual Automobile Show, in connection with South Florida Fair, Tampa Automobile Dealers' Ass'n, E. V. Plane, Mgr.
Holyoke, Mass.	Jan. 22-29	.....	Annual Automobile Show, Holyoke Automobile Dealers' Ass'n, Appleton-Race Bldg.	Minneapolis	Feb. 5-12	.....	Northwestern Automobile and Industrial Exposition, Northwest Terminal Bldg.
Amsterdam, N. Y.	Jan. 22-29	.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Reading, Pa.	Feb. 7-11	.....	Annual Automobile Show, Reading Automobile Dealers' Ass'n, Auditorium.
Lawrence, Mass.	Jan. 24-29	.....	First Annual Automobile Show, State Armory, W. H. Partian, Mgr.	Newburgh, N. Y.	Feb. 7-12	.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
Columbus	Jan. 24-29	.....	Annual Automobile Show, Columbus Automobile Show Co., Memorial Hall, Anson B. Coates, Mgr.	Columbus	Feb. 7-12	.....	National Tractor Show, Columbus Tractor and Implement Club, Ohio State Fair Grounds.
Chico, Cal.	Jan. 25-29	.....	Annual Automobile Show, Butte County Automobile Trades Ass'n, H. E. Ward, Mgr.	Rochester, N. Y.	Feb. 7-12	.....	Automobile Show, Rochester Automotive Trades Ass'n, Exposition Park.
New Bedford, Mass.	Jan. 25-29	.....	Annual Automobile Show, Armory, S. D. Peirce, Mgr.	Bridgeport, Conn.	Feb. 7-12	.....	Annual Automobile Show, Bridgeport Automotive Ass'n, Inc., L. J. McCracken.
Lancaster, Pa.	Jan. 26-29	.....	Annual Automobile Show, Lancaster Automobile Trade Ass'n, Fairmount Garage, R. W. Schreiner, Mgr.	Tulsa, Okla.	Feb. 7-12	.....	Annual Automobile Show, Tulsa Automobile Dealers Ass'n.
Chicago	Jan. 29-Feb. 4	.....	National Passenger Car Show, Coliseum, National Automobile Chamber of Commerce.	Yonkers, N. Y.	Feb. 7-12	.....	Annual Automobile Show, State Armory, W. H. Partian, director.
York, Pa.	Jan. 29-Feb. 6	.....	Annual Automobile Show, York County Automobile Dealers' Ass'n, Overland Garage, A. H. Geesey, Mgr.	St. Louis	Feb. 7-12	.....	Annual Automobile Show, St. Louis Automobile Manufacturers' & Dealers' Ass'n, Robert E. Lee, Mgr.
Allentown, Pa.	Jan. 29-Feb. 12	.....	Annual Automobile Show, Lehigh Automotive Trades Ass'n, Association Bldg.	Schenectady, N. Y.	Feb. 7-12	.....	Annual Automobile Show, J. J. Callahan, Mgr.
Hudson, N. Y.	Jan. 31-Feb. 5	.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Bucyrus, Ohio	Feb. 9-12	.....	Annual Automobile Show, Crawford County Automotive Trade Ass'n, C. J. Carmean, Sec'y.
London, Ont.	Jan. 31-Feb. 5	.....	National Motor Show of Western Ontario, Automotive Retailers' Ass'n, L. C. Kirby, Mgr.	Kansas City	Feb. 12-19	.....	Annual Automobile Show, Kansas City Motor Car Dealers' Ass'n, Ed Peake, Mgr.
Erie, Pa.	Jan. 31-Feb. 5	.....	Annual Automobile Show, Automotive Association of Erie, General Electric Bldg. John Roth.	Hartford, Conn.	Feb. 12-19	.....	Annual Automobile Show, Hartford Automobile Dealers' Ass'n, Armory, Arthur Fifoot, Mgr.
Cumberland, Md.	Jan. 31-Feb. 5	.....	Annual Automobile Show, Cumberland Automobile Dealers' Ass'n, State Armory.	Fitchburg, Mass.	Feb. 12-19	.....	Annual Automobile Show, Armory, W. H. Partian, Mgr.
Oakland, Cal.	Jan. 31-Feb. 6	.....	Annual Automobile Show, Alameda County Automotive Trades Ass'n, Oakland Civic Auditorium.	Winnipeg	Feb. 14-19	.....	Automotive Equipment Show, W. L. Williams, Secretary of Executive Committee.
Scranton, Pa.	Jan. 31-Feb. 10	.....	Passenger Car Show, Scranton Motor Trades Ass'n, Armory, H. B. Andrews, Mgr.	Worcester, Mass.	Feb. 14-19	.....	Annual Automobile Show, Worcester Automotive Ass'n, Casino.
Madison, Wis.	February	.....	Annual Automobile Show, Automobile Dealers' Division, Madison Ass'n of Commerce, Ordinance Bldg., Don E. Mowry, Mgr.	Trenton, N. J.	Feb. 16-19	.....	Annual Automobile Show, Trenton Automobile Trade Ass'n, Armory.
				Streator, Ill.	Feb. 17-19	.....	Annual Automobile Show, Streator Automobile Trade Ass'n, P. J. Hunt, Mgr.
				Ottawa, Ill.	Feb. 17-19	.....	Annual Automobile Show, Conde Motor Supply Co., Armory.
				San Bernardino, Cal.	Feb. 18-23	.....	Annual Automobile Show in conjunction with National Orange Show, San Bernardino Automotive Trades Ass'n, Wichita Springs Park, Fred M. Renfro, Mgr.

San Francisco	Feb. 19-26.....	Fifth Annual Pacific Coast Show, Exposition Auditorium, George Wahlgren, Mgr.	Portland, Me.....	Feb. 28-Mar. 5.....	Annual Automobile Show, Portland Automobile Dealers' Ass'n, Exposition Bldg., H. B. Chandler, Mgr.
Albany, N. Y.....	Feb. 19-26.....	Annual Automobile Show, Albany Automobile Dealers' Ass'n, Armory, J. B. Wood, Mgr.	Wichita, Kan.....	March 1-5.....	Annual Automobile Show, Wichita Motor Trade Ass'n, Exposition Bldg., Henry B. Marks, Mgr.
Pittsfield, Mass.	Feb. 21-26.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.	Wilmington, Del.....	March 1-5.....	Annual Automobile Show, Wilmington Automobile Trade Ass'n, Auditorium.
Deadwood, S. D.....	Feb. 21-26.....	Annual Automobile Show, Auditorium.	Quincy, Ill.....	March 1-5.....	Annual Automobile Show, State Armory, Quincy Automotive Trade Ass'n.
Salt Lake City.....	Feb. 21-26.....	Annual Automobile Show, Intermountain Automotive Trade Ass'n, W. D. Rishel, Mgr.	Des Moines	March 2-10.....	Annual Automobile Show, Coliseum, C. G. Van Vleet, Mgr.
Louisville	Feb. 21-26.....	Annual Automobile Show, Louisville Automobile Dealers' Ass'n, Armory.	Brooklyn	March 5-12.....	Annual Automobile Show, Brooklyn Motor Vehicle Dealers' Ass'n, 23rd Regiment Armory, George C. Lewis, Chmn.
Grand Rapids, Mich....	Feb. 21-26.....	Automobile Business Association, Furniture Exhibition Bldg., M. D. Elgin, Mgr.	Atlanta	March 5-12.....	Annual Automobile Show, Atlanta Automobile Ass'n, Auditorium, Virgil Shepard, Mgr.
Elmira, N. Y.....	Feb. 21-26.....	Annual Automobile Show, Elmira Automobile Club, State Armory, H. S. Bryan, Mgr.	New Haven, Conn.....	March 5-12.....	Annual Automobile Show, New Haven Automotive Dealers' Ass'n, Arena.
Manchester, N. H.....	Feb. 21-26.....	Annual Automobile Show, New Hampshire Automobile Dealers' Ass'n, Armory, C. E. Norris, Mgr.	Pittsburgh	March 5-12.....	Annual Automobile Show, Automotive Ass'n, Inc., Motor Square Garden, J. J. Bell, Mgr.
Amarillo, Texas.....	Feb. 22-24.....	Annual Automobile Show, in conjunction with Buyers and Sellers Convention, Amarillo Automotive Ass'n.	Springfield, Mass.	March 7-12.....	Annual Automobile Show, Springfield Automotive Ass'n, Auditorium, Harry W. Stacy, Mgr.
Binghamton, N. Y.....	Feb. 22-26.....	Annual Automobile Show, Binghamton Dealers' Ass'n, Armory, R. B. Moffitt, chmn.	Indianapolis	March 7-12.....	Annual Automobile Show, Indianapolis Automotive Trade Ass'n, State Fair Grounds, John Orman, Mgr.
Poughkeepsie, N. Y....	Feb. 22-26.....	Annual Automobile Show, State Armory, W. H. Partlan, Mgr.	Pendleton, Ore.....	March 10-12.....	Annual Automobile Show, Pendleton Automotive Ass'n, Happy Carmon, J. B. Knight, Mgr.
Galesburg, Ill.....	Feb. 22-26.....	Annual Automobile Show, Galesburg Automotive Dealers' Ass'n, Armory.	Newark, N. J.....	March 12-19.....	Annual Automobile Show, New Jersey Automobile Exhibition Co., 1st Regiment Armory.
Saginaw, Mich.....	Feb. 22-26.....	Annual Automobile Show, Saginaw Automotive Dealers' Ass'n, R. B. Bishop, Sec'y.	Syracuse, N. Y.....	March 12-19.....	Annual Automobile Show, Syracuse Automotive Dealers' Ass'n, Armory, H. H. Smith, Mgr.
Newton, Kan.....	Feb. 23-26.....	Annual Automobile Show, Harvey County Motor Trade Ass'n, Auditorium, Henry Marks, Mgr.	Boston	March 12-19.....	Annual Automobile Show, Boston Automobile Dealers' Ass'n, Mechanic Bldg. and South Armory.
Clinton, Iowa	Feb. 23-26.....	Annual Automobile Show, Clinton County Automobile Dealers' Ass'n, Coliseum, H. C. Finch, Sec'y.	Scranton, Pa.....	March 14-17.....	Truck and Tractor Show, Scranton Motor Trades Ass'n, Armory, H. B. Andrews, Mgr.
Malone, N. Y.....	Feb. 23-26.....	Annual Automobile Show.	Omaha, Neb.....	March 14-19.....	Annual Automobile Show, Omaha Automobile Trade Ass'n, Omaha Auditorium, C. G. Powell, Mgr.
Buffalo	Feb. 26-Mar. 5.....	Annual Automobile Show, Buffalo Automobile Dealers' Ass'n, 74th Regiment Armory, C. C. Proctor, Mgr.	Greenville, S. C.....	March 16-19.....	Annual Automobile Show, Greenville Dealers' Ass'n, Textile Hall.
Duluth, Minn.....	Feb. 28-Mar. 5.....	Annual Automobile Show, Duluth Automobile Trade Ass'n, Armory.	Torrington, Conn.....	March 20-26.....	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
Muskegon, Mich.....	Feb. 28-Mar. 5.....	Annual Automobile Show, Muskegon Automotive Business Ass'n, New Armory, J. C. Fowler, Mgr.			

Second Annual Convention of Automotive Service Associations



CHANGES In the Trade

H. L. Garton has been appointed service manager of the Clemens Automobile Co., Des Moines, Iowa, succeeding H. C. Goodchild. The company handles the Willys-Knight and Overland.

Corbin Bros. have been appointed Reading, Pa., distributors for White motor trucks. A well-equipped service station is a feature of their business.

Harter B. Hull has purchased the Dodge Brothers distributing franchise at Waterloo, Iowa, which covers seven counties under a 400 car contract.

The Autocar Co., Ardmore, Pa., has established a sales and service branch in Hartford, Conn. C. W. Clark is sales manager and C. W. Pugh service manager.

Hamilton W. Jones, lately with an American exporting house as South African representative, has joined the A. C. Hine Co., Hartford, Conn., as sales manager.

John D. Giddings has resigned from the managership of the Crescent Motor Co., Fond du Lac, Wic., and this has now been assumed by H. F. Zinke and E. R. Zanzow. The Studebaker, Overland and Willys-Knight lines will be continued.

Forest H. Akers has been appointed assistant general sales manager of the Republic Truck Sales Corp. He has been associated for seven years with Reo, and previous to that was with Oliver Chilled Plow Works and the Ohio Rake Co.

E. Hives, who has been for more than ten years chief of the experimental department of the Rolls-Royce British plant, is in America checking up on certain points in connection with the products of the American factory at Springfield, Mass.

J. H. Desmond, for the past three years district manager for the Hart-Parr Co. over their Canadian territory with headquarters at Regina, has been called to the factory at Charles City and placed in charge of all salesmen in the field.

B. F. Goodrich Rubber Co. has closed the Hartford branch, the territory henceforth to be controlled from New Haven. E. J. Cross, manager of the Hartford branch, takes over the New Haven branch. C. W. Lindley and W. J. Parker, Hartford salesman, remain in that territory.

Ludwig T. Kuehl, of Racine, Wis., has been elected a director and vice-president of the Northeastern Rubber Co., New York, succeeding George G. Bryant of Milwaukee. Richard G. Bryant, of Racine, is president and treasurer. Charles E. Davies has been elected a director and secretary.

Hanauer Automobile Co., the oldest in Cincinnati, has taken over the distribution of the Cole automobile in a territory embracing parts of Ohio, Indiana and Kentucky. Charles Hanauer, head of the company, made the first automobile sale, so far as is known, in Cincinnati. He had the agency for the old Oldsmobile nearly twenty years ago.

William A. Evans, formerly general service manager of the Packard Motor Car Co. of New York and lately in charge of the Cunningham service department, has gone into business for himself under the firm name of Evans & Ould. Offices have been opened at 1780 Broadway, and the firm will represent several lines of automotive goods as manu-

facturers' agents. Evans is a director of the automotive service association of New York.

Victor M. Stamm, one of the best known figures in the tire and rubber trade of the Northwest, has resigned as manager of the Milwaukee branch of the United States Rubber Co., after seven years of service, to engage in the life underwriting business with the home agency of the Northwestern Mutual Life Insurance Co. of Milwaukee. Stamm was for eighteen years associated with the Milwaukee branch of the Goodyear Rubber Co. prior to joining the United States Rubber Co.

Gaylord A. Hoyt and W. N. Grounsell have joined the sales force of the Franklin Automobile Co. of Syracuse. Hoyt was with the Bell telephone system for the past twenty years, and for the past twelve years had acted as district plant superintendent for the New York Telephone Co. Grounsell was for eight years with the Buick Motor Co., acting as a special representative under W. C. Durant, and later was employed as a salesman for the Midvale Steel & Ordnance Co., New York.

F. J. HAYNES ELECTED PRESIDENT OF DODGE

NEW YORK, Jan. 13—The election of F. J. Haynes to the presidency of Dodge Brothers, at a directors' meeting in Detroit yesterday, was greeted with great enthusiasm by Dodge dealers attending a show luncheon at the Waldorf-Astoria here. Announcement of the election was made by Charles W. Matheson, general sales manager, who was presiding at the dealers' meeting. Howard B. Bloomer, personal friend and attorney to John and Horace Dodge, was elected chairman of the board of directors.

Haynes has been with Dodge since 1912, beginning as factory manager and working his way to the vice-presidency and general managership. He was with Franklin from 1901 to 1912 and prior to that had been with the E. C. Stearns Co., Toronto, and the National Cycle & Automobile Co. Haynes was superintendent of the Hamilton plant of the National company and there first became associated with John Dodge, then general manager there.

Ellis to Handle Lincoln

COLUMBUS, Jan. 15—A new retail concern has been organized in Columbus under the name of the B. M. Ellis Motor Co., for the purpose of distributing the Lincoln line in Columbus and Central Ohio. B. M. Ellis, the head of the company, was connected with the Standard Motor Car Co. for the past eight years and his experience in the sale of automobiles dates back almost twenty years. The Lincoln will be exhibited at the coming annual Columbus Automobile Show the week of Jan. 24.

Hohnes Named Staff Officer

BOSTON, Jan. 14—Robert P. Hohnes, sales manager of the Standard here, has been appointed to the staff of Gov. Channing H. Cox. He is an overseas veteran, serving with the 101st Engineers, formerly the 1st Corps of Cadets. He is now captain and supply officer of the 1st Engineers, M. V. M.

ENGINEERS DISCUSS OPERATING ECONOMY

Important Place Given to Fuel Research Reports at S. A. E. Annual Meeting

NEW YORK, Jan. 17—Results of research work on fuel for internal combustion engines were recounted at the annual meeting here last week of the Society of Automotive Engineers. One entire day was devoted to this subject. C. F. Kettering, president of the Dayton Engineering Laboratories Co., presided at the sessions and told what had been accomplished in his own laboratories.

Frank A. Howard of the Standard Oil Co. discussed the volatility of motor gasoline from the standpoint of the petroleum industry. He believes that the commercial gasoline of to-day can be handled satisfactorily by the use of properly heated manifolds. He showed why heating the air entering the carburetor alone does not produce desired results.

A paper by C. A. Woodbury on flame movement in a closed cylinder gave the result of research into this phenomena along lines similar to those pursued by Professor H. B. Dixon in England.

A. L. Nelson, chief engineer of the Premier Motor Car Corp., gave the results of extensive tests showing how marked improvement in fuel economy had been gained by changes in valve timing and gear ratio. He described also a type of inlet manifold in which the fuel is heated without materially raising the air temperature and a new type of aluminum piston in which it has been proved possible to maintain constant clearance, thus eliminating a serious difficulty in this type.

A. C. Dickinson gave a resume of certain fuel research work undertaken by the Bureau of Standards, and R. E. Fielder described a thermostatic device for temperature control designed for use on buses operated by the Fifth Avenue Coach Co.

A report of extensive tests conducted by the Bureau of Mines on over 100 vehicles including passenger cars and several sizes of trucks, showed that in the average case at least 25 per cent of the fuel used is wasted due to incomplete combustion in the engine cylinders. This and other papers at the meeting indicated that the operating and maintenance engineer as well as the designing engineer still have much to do by way of improving the economy of vehicles now in use and yet to be built.

The first highway session ever held by the Society was conducted by H. W. Alden as chairman and developed much of interest in the relation between highway construction and the construction of automotive vehicles, particularly trucks.

A Correction

On page 17 of Motor World for Jan. 12 the caption for Fig. 2, which reads Seven-passenger Velie, model 48, should read Two-passenger Velie roadster.

HIGHWAY CONFEREES ADOPT UNIFORM ACT

WASHINGTON, D. C., Jan. 13—Principles of a uniform vehicle act were adopted here by the National Conference on Highway Traffic Regulations, and there was practically no variation from the proposed uniform vehicle law adopted last year by a committee representing the National Automobile Chamber of Commerce, American Automobile Association, American Association of State Highway Officials and the Highway Industries Association. The acceptance of these principles virtually means that instead of six national organizations there will be more than 30 organizations pledged to support the underlying principles in an effort to have them placed on the statutes of all States.

At the suggestion of Harry Meixell, representing the National Automobile Chamber of Commerce, National Automobile Dealers Association, Motor and Accessory Manufacturers Association,

and the Rubber Association of America, the conference did not specify any weight limitation.

On the objection of Meixell, in behalf of the automotive organizations, the conference reconsidered its vote on mandatory stops at crossings and refused to include it in the declaration of principles.

Inland Takes Over Shurnuff

ST. LOUIS, Jan. 14—The Inland Machine Works has absorbed the Shurnuff Mfg. Co. and will continue the manufacture of its products, which include a spark plug, combination manifold, grease retainer, runningboard support and a heater. Former prices will be continued. Sales are made only through jobbers.

Stockholders of the Shurnuff company are now stockholders in the Inland works, and two directors of the former company are now directors on the Inland. One of these is John F. Shufold, well known to the jobbing trade.

AVALANCHE OF BILLS IN CALIFORNIA HOUSE

SACRAMENTO, CAL., Jan. 14—The usual avalanche of bills intended to revise the statutes regulating automobiles and other motor vehicles, are pouring into the California legislature, which opened its sessions here on Jan. 3. There are all kinds of bills, many of them of a decidedly "freak" variety, but the system employed in handling these measures practically insures against any wild measure being passed by a chance vote.

All the bills relating to motor vehicles are referred to the committees on Motor Vehicles in the Assembly and the Senate. The Assembly Committee becomes the clearing house for them all, and the desirable bills are framed into amendments and inserted into the Motor Vehicle Act.

It is assured there will be a fight over the proposed law to make gasoline a public utility, in which case its price would be set by the State Railroad Commission.

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Plev Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Plev Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Plev Capacity					
Allis-Chalm.	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	G-O	14-28	\$1485	4	Wauk.	4-4 1/2 x 5 1/2	Ker.	3	Pioneer	G	18-36	4	Own	4-5 1/2 x 6	Ker.	4					
Allis-Chalm.	10-18		3	Own	2-5 1/2 x 7	G.K.	2-3	Grain Belt	18-36	2500	4	Wauk.	4-1 1/2 x 6 1/2	GorK	4	Pioneer	C	30-60	4	Own	4-7 x 8	G.	10					
Allis-Chalm.	18-30		4	Own	4-1 1/2 x 6 1/2	G.K.	3-4	Gray	18-36		3	Wauk.	4-1 1/2 x 6 1/2	G.K.	4	Pioneer	Man.	15-30	\$1995	4	Buda	4-4 1/2 x 6	G.K.	4				
Allwork	12-25		4	Own	4-4 1/2 x 6	GorK	3	Ground Hog		2800	4	Wauk.	4-4 x 6	Ker.	4	Port Huron	A	12-25	1700	4	Chief	4-4 1/2 x 6	G.K.	3				
Andrews-KinD	14-28		4	Own	4-5 x 6	G.K.	3	Gt. Western St.	20-30	1950	4	Beav.	4 1/2 x 6	K.	4	Post		12-20		4	Wauk.	4-4 1/2 x 5 1/2	GorK	2				
Appleton	18-36		4	Clim.	4-5 1/2 x 6 1/2	GorK	4	Hart-Parr			4	Own	2-3 1/2 x 6 1/2	K,D	3	Prairie Dog	L	9-18		3	Wauk.	4-3 1/2 x 5 1/2	Gas.	3				
Appleton	12-20	\$1500	4	Buda	4-1 1/2 x 5 1/2	G.K.	2-3	Hart-Parr	20	1195	4	Own	2-6 1/2 x 7	K,D	3	Prairie Dog	D	15-30		4	Wauk.	4-4 1/2 x 6 1/2	Gas.	3				
Aultman-T	15-30		4	Clim.	4-5 x 6 1/2	G.K.	4	Heider	30	1595	4	Own	4-1 1/2 x 5 1/2	G,K	3	Range	T20	8-16	1250	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1				
Aultman-T	22-45		4	Own	4-5 1/2 x 6	G.K.	6	Heider	D	9-16	4	Wauk.	4-1 1/2 x 5 1/2	G,K	2	Reed		15-30	2195	4	Dom	4-4 1/2 x 6	K	3				
Aultman-T	30-60		4	Own	4-7 x 9	G.K.D	8	Heider	C	12-20	4	Wauk.	4-4 1/2 x 6 1/2	G,K	3	Reliable		10-20	935	4	Own	2-6 x 7	G.K.D	2				
Automot. B-3	12-24		4	Herc's	4-4 x 5 1/2	G.K.	2-3	Heider	Caft	6-10	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Reg.		12-25	1600	4	Wauk.	4-4 1/2 x 6 1/2	G.K.D	3				
Avery SR.Cal.	5-10		4	Own	4-3 x 4	G.K.		Hicks	15-30	1750	4	Wauk.	4-4 1/2 x 6	KorG	4	Samson				4	Own	4- x	G.K	2				
Avery Cult			3	Own	6-3 x 4	G.K.		Huber	12-25	1385	4	Wauk.	4-4 1/2 x 5 1/2	G,K,D	3	Sandusky	J	10-20	1250	4	Own	4-1 1/2 x 5 1/2	G,K,D	2				
Avery Plan			3	Own	6-3 x 4	G.K.		Illinois	C	18-36	2375	4	Clim.	4-5 x 6 1/2	G,K	4	Sandusky	E	15-35	1750	4	Own	4-5 x 6 1/2	G,K,D	4			
Avery B	5-10		4	Own	4-3 x 4	G.K.	2	Imperial	40	40-70	5000	4	Own	4-7 1/2 x 9	G,K,D	10	Shawnee		6-12		2	LeR.	4-3 1/2 x 4 1/2					
Avery C			4	Own	6-3 x 4	G.K.	2	Indiana	5-10		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Shawnee		9-18		2	Gray	4-3 1/2 x 4 1/2						
Avery	8-16		4	Own	2-5 1/2 x 6	G,K,D	2-3	International	8-16		4	Own	4-4 1/2 x 5	G,K,D	2	Shelby	C	9-18		4	Wauk.	4-3 1/2 x 5 1/2	Gas.	2				
Avery	12-25		4	Own	2-6 1/2 x 7	G,K,D	3-4	International	15-30		4	Own	4-5 1/2 x 8	G,K,D	4	Shelby	D	15-30		4	Beav.	4-4 1/2 x 6	G.K	3				
Avery	14-28		4	Own	4-4 1/2 x 7	G,K,D	4-5	J-T	N	16-30		*2	Chief	4-4 1/2 x 6	G,K	3-4	Short Turn		20-40	1500	3	Clim.	4-5 x 6 1/2	K,G	3			
Avery	18-36		4	Own	4-6 1/2 x 7	G,K,D	5-8	Kardel Util.			4	Midw	4-4 1/2 x 5 1/2	GorK	3	Square T		18-35		4	Own	4-4 x 5	Gas.	3				
Avery	25-50		4	Own	4-7 1/2 x 8	G.K.D	8-10	Kee-Geck	12-25	1615	4	Own	2-7 1/2 x 8	G,K	3	Steady Pull		12-24	1485	4	Own	4-4 1/2 x 6 1/2		3-4				
Bates All St.	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Klumb	F	16-32		4	Clim.	4-5 x 6 1/2			Stearns	2	15-30	2,200	4	Beav.	4-4 1/2 x 6	G,K	4			
Bates S.M.	15-22		*4	Own	4-4 1/2 x 6	G,K,D	3	LaCrosse	M	7-12	950	4	Own	2-4 x 6	G,K		Stinson	4E	18-36		4	Beav.	4-4 1/2 x 6	G,K	4			
Bean	8-16		*1	Own	14-3 1/2 x 4	G,K	2-3	LaCrosse	G	12-24	1250	4	Own	2-6 x 7	Ker.	3	Stone	20-40		4	Beav.	4-4 1/2 x 6	G,K	4				
Beeman	2-4	340	2	Own	1-3 1/2 x 4 1/2	Gas.	1 1/2	Lauson	15-25		4	Beav.	4-4 1/2 x 6	G,K,D	3-4	Tioga		15-27	2025	4	Wic.	4-4 1/2 x 6	G,K	3-4				
Best	30-3250		*2	Own	4-4 1/2 x 6 1/2	G,K,D	8-1	Lauson	15-30		4	Beav.	4-4 1/2 x 6	G,K,D	3-4	Titan		10-20		4	Own	2-6 1/2 x 8	G,K,D	3				
Best	35-60	5750	*2	Own	4-4 1/2 x 6 1/2	G,K,D	8-1	Lauson	15-30		4	Beav.	4-4 1/2 x 6	G,K,D	3-4	Tillmore	A	2-6	385	4	Wauk.	4-4 1/2 x 6	Gas.	4-6				
Boring			3	Wauk.	4-4 1/2 x 6 1/2	GorK	2	Lauson Road	15-30		4	Beav.	4-4 1/2 x 6	G,K,D	3-4	Topp	B	30-45	4000	4	Wauk.	4-4 1/2 x 6	Gas.	2				
Bull	12-24	1200	3	Toro	2-5 1/2 x 7	G,K	3	Leader	B	12-20		4	Beav.	2-6 x 6 1/2	G,K,D	2-3	Tore		6-12	950	4	LeR.	4-3 1/2 x 4 1/2	Gas.	2			
Burn-Oil	15-30	1650	4	Own	2-6 1/2 x 7	G.K	3	Leader	N	16-32		4	Clim.	4-5 x 6 1/2	G,K	3	Traylor		6-12	815	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1			
Capital	15-30	1500	2	Own	4-4 1/2 x 6	Gas.	33	Leader	C	18-36		4	Clim.	4-5 x 7 1/2	G,K,D	4-6	Triumph	H	18-36	2450	4	Erd.	4-4 1/2 x 6	Ker.	4			
Case	10-18	1200	4	Own	4-3 1/2 x 5	G,K,D	3-4	Leonard	E	20-30	2530	4	Buda	4-4 1/2 x 6	G,K	3	Turner		14-25		4	Buda	4-4 1/2 x 5 1/2	G,K	3			
Case	15-27	1800	4	Own	4-4 1/2 x 6	G,K,D	3-4	Liberty	18-32	2475	4	Clim.	4-5 x 6 1/2	G,K	4	Twin City		12-20		4	Own	4-4 1/2 x 6	G,K	3				
Case	22-40	3100	4	Own	4-5 1/2 x 6 1/2	G,K,D	4-5	Little Bear	4	850	4	Ford	4-3 1/2 x 4	Gas.	4	Twin City		20-37		4	Own	4-5 1/2 x 6 1/2	G,K	5				
Caterpillar	25x40		*2	Own	4-4 1/2 x 6	Gas.	6	Little Giant	B	16-22	2200	4	4-4 1/2 x 5 1/2	K	4	Twin City		40-65		4	Own	4-5 1/2 x 6 1/2	G,K	5				
Caterpillar	40-60		*2	Own	4-6 1/2 x 7	Gas.	6	Lombard	A	26-35	3300	4	4-5 1/2 x 6	K	6	Uncle Sam		10-18	1485	4	Wid	4-4 1/2 x 5 1/2	Ker.	2				
Chase	12-25	1785	3	Buda	4-4 1/2 x 5 1/2	G,K,D	2-3	Macultivator		1 1/2	225	2	Wauk.	1-2 1/2 x 3 1/2	Gas.		Uncle Sam		20-30	2300	4	Beav	4-4 1/2 x 6	Ker.	3-4			
Cletrac	12-20	1495	*2	Own	4-4 x 5 1/2	G,K,D	2-3	Magnot		14-28		4	Wauk.	4-4 1/2 x 6 1/2	K&G	3	Universal		1-4	475	2	Own	1-3 1/2 x 5	G	1			
Dakota	15-27	1750	3	Dom.	4-4 1/2 x 6	G,K	3	Market		2-4 1/2		4	Wauk.	1-4 x 4	Gas.		Utiliter		14-3 1/2	380	2	Own	1-3 1/2 x 4 1/2	Gas.	1 1/2			
Dart	15-30	2000	4	Buda	4-4 1/2 x 6	Gas.	3-4	Master Jr.		4-8		4	Wauk.	1-2 1/2 x 2 1/2	Gas.		Velle		12-24	1750	4	Own	4-4 1/2 x 5 1/2	G,K,D	3			
Dill	20	2480	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Merry Gar		2	230	2	Wauk.	1-2 1/2 x 2 1/2	Gas.		Victory		9-18	1385	4	Gray	4-3 1/2 x 5	Gas.	2			
Do-It-All		595						Minne. All-P		12-25	1325	4	Wauk.	4-4 1/2 x 7	GorK	3	Victory		15-30	1750	4	Wauk.	4-4 1/2 x 5 1/2	Gas.	3			
Engle	12-22	1390	4	Own	2-7 x 8	Ker.	3	Mohawk		8-16	785	2	Wauk.	4-3 1/2 x 4 1/2	KorG	1-2	Vim		10-20	1285		Wauk.	4-3 1/2 x 5 1/2	G,K	2-2			
Engle	16-30	1850	4	Own	2-8 x 8	Ker.	4	Moline Univ.		9-18	1325	2	Wauk.	4-3 1/2 x 5	Gas.	2-3	Wallis	K	15-25		4	Own	4-4 1/2 x 5 1/2	G,K,D	3			
E-B	12-20		4	Own	4-4 1/2 x 5	Ker.	3	Moline Orch.		9-18	1375	2	Wauk.	4-3 1/2 x 5	Gas.	2-3	Waterloo		12-25		4	Own	2-6 1/2 x 7	G,K,D	3			
E-B	12-20		4	Own	4-4 1/2 x 5	Ker.	3	Monarch		30-18	3250	*2	Wauk.	4-4 1/2 x 6	Ker.	4	Webfoot		28-53	5250	*2	Wisc.	4-5 1/2 x 7	G,D	6			
E-B	16-32		4	Own	4-5 1/2 x 7	Ker.	4	Motex		15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3	Wellington		12-22		4	Wauk.	4-4 x 4	Ker.	2-3			
E-B Reeves	40-65		4	Own	4-7 1/2 x 9	Ker.	8-10	New Britain	1	3-6	450		Own	2-3 1/2 x 4	Gas.		Wellington		16-30		4	Wauk.	4-4 1/2 x 6	Ker.	3-4			
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G,K	4	New Britain	2	3-6	500		Own	2-2 1/2 x 4	Gas.		Wetmore		12-25	1650	4	Wauk.	4-4 x 5 1/2	Gas.	2-3			
Faguel	9-12	1525	4	Lyc.	4-3 1/2 x 5	G,K,D	2	Nilesen Spec.		10-20		Wauk.	4-3 1/2 x 5	Gas.	2	Whitney		9-18	1175	4	Own	2-5 1/2 x 6 1/2	Gas.	2				
Farm Horse	18-30	1685	4	Clim.	4-5 x 6 1/2	G,K	3-4	Nilesen Senior		20-40	2675	5	Wauk.	4-5 x 6 1/2	G,K	4	Wichita		15-30	2500	4	Beav.	4-4 1/2 x 6	Ker.	3-4			
Farquhar	15-25		4	Buda	4-4 1/2 x 6	G,K,D	3-4	Oil Pull		12-20		4	Own	2-6 x 8	K,D	3	Wisconsin	E	16-30		4	Clim.	4-5 x 6 1/2	G,K,D	4			
Farquhar	18-35		4	Own	4-6 x 8	G,K.	4-5	Oil Pull		16-30		4	Own	2-7 x 8 1/2	K,D	4	Zelle		12-25		4	4-4 1/2 x 5 1/2	Ker.	3				
Farquhar	25-50		4	Own	4-7 x 8	G,K	6-7	Oil Pull		20-40		4	Own	2-8 x 10	K,D	5-6												
Fitch	20-35		4	Clim.	4-5 x 6 1/2	G,K,D	3-4	Oil Pull		30-60		4	Own	2-10 x 12	K,D	8-10												
Flour City	20-35		4	Own	4-5 1/2 x 6	Ker.	4-6	Oldsmar		1 1/2-5	395	2	Own	1-5 1/2 x 5 1/2	Gas.	1												
Flour City	30-50		4	Own	4-6 1/2 x 7	Ker.	6-8	Oliver		15-30	3500	*2																

Specifications of Current Models of Passenger Cars

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....	H-S	6-3 1/2 x 5	115	32x4	\$2260	\$2260	.....	.....	.....	Madison.....	Ow.	6-3 1/2 x 5	115	33x4	\$1570	\$1570	.....	.....	.....
Allen.....	Series 43	6-3 1/2 x 5	110	32x4	1595	1595	.....	.....	\$2395	Maibohm.....	B	6-3 1/2 x 5 1/2	116	32x4	1575	1575	.....	.....	\$2395
American.....	C-H-S	6-3 1/2 x 5	127	32x4	2395	2395	\$2475	\$3295	3495	Marmion.....	34	6-3 1/2 x 5 1/2	136	32x4 1/2	5300	.....	\$5000	6150	6600
Anderson.....	30	6-3 1/2 x 4 1/2	120	33x4	2195	2145	2195	3300	3200	Maxwell.....	25	6-3 1/2 x 5 1/2	109	30x3 1/2	995	995	.....	1595	1695
Apperson.....	820-S	8-3 1/2 x 5	130	34x4 1/2	.....	13500	3500	4500	4500	McFarlan.....	147	6-4 1/2 x 6	140	35x5	6300	16300	6300	7500	7500
Apperson.....	Anniversary	8-3 1/2 x 5	130	34x4 1/2	.....	4250	4250	6000	6000	Mercer.....	Series 5	6-3 1/2 x 5 1/2	132	32x4 1/2	3045	1950	*3950	5150	5650
Auburn.....	639 H-K	6-3 1/2 x 4 1/2	120	32x4	11945	1895	.....	2995	2995	Meteor.....	K&R	4-4 1/2 x 6	129	32x4 1/2	5500	5500	.....	.....	.....
Beggs.....	20T	6-3 1/2 x 4 1/2	120	33x4	.....	2000	.....	.....	.....	Metz.....	M6	6-3 1/2 x 5	120	32x4	1995	1995	.....	2795	2895
Bell.....	H-S	4-3 1/2 x 5	114	31x4	1495	1495	.....	.....	.....	Mitchell.....	F-40	6-3 1/2 x 5	10	33x4	1750	1750	.....	2800	2900
Biddle.....	B1	4-3 1/2 x 5 1/2	121	32x4	3750	3750	3950	.....	.....	Monitor.....	S-9	6-3 1/2 x 4 1/2	121	33x4	2475	2475	.....	.....	3475
Bour-Davis.....	21	6-3 1/2 x 5 1/2	126	33x4 1/2	2585	2535	2585	.....	.....	Monroe.....	6-48	6-3 1/2 x 4 1/2	122	32x4	2085	1985	.....	2985	2985
Bradley.....	Four	6-3 1/2 x 5 1/2	126	33x4 1/2	.....	1265	.....	.....	.....	Moon.....	6-30	6-3 1/2 x 5 1/2	125	32x4 1/2	2585	.....	2495	3485	3485
Brewster.....	Ow.	4-4 1/2 x 5 1/2	125	34x4 1/2	.....	19000	.....	.....	10500	Moore.....	30	6-3 1/2 x 5	106	30x3 1/2	.....	1095	.....	.....	.....
Briscoe.....	4-34	4-3 1/2 x 5	109	31x4	1285	1285	.....	1885	1885	Murray.....	Ow.	8-3 1/2 x 5	128	34x4 1/2	.....	3500	.....	.....	.....
Brook.....	S-21	2-3 1/2 x 3.67	90	28x3	395	.....	.....	.....	.....	Nash.....	681-6	6-3 1/2 x 5	121	33x4	1695	1695	1850	2650	2895
Buick.....	21-44-5-6-7	6-3 1/2 x 5 1/2	118	33x4 1/2	1795	1795	.....	2885	2895	Nash.....	682	6-3 1/2 x 5	127	34x4 1/2	.....	1875	1875	2650	2895
Buick.....	21-48-9-50	6-3 1/2 x 5 1/2	124	34x4 1/2	.....	.....	2065	2985	3295	National Sextet.....	BB	6-3 1/2 x 5 1/2	130	32x4 1/2	3750	13750	3750	4900	4950
Cadillac.....	59	8-3 1/2 x 5 1/2	125	34x4 1/2	3990	13990	4090	4600	4950	Nelson.....	D	4-3 1/2 x 4 1/2	104	32x4	.....	1700	.....	.....	.....
Case.....	V	6-3 1/2 x 5 1/2	126	34x4 1/2	.....	2650	2650	3400	3750	Noma.....	IC	6-3 1/2 x 4 1/2	128	32x4 1/2	3000	3200	.....	.....	.....
Chalmers.....	6-30	6-3 1/2 x 4 1/2	117	32x4	1795	1755	.....	2395	2745	Norwalk.....	430-KS	4-3 1/2 x 5	116	32x3 1/2	.....	1385	.....	.....	.....
Chalmers.....	630	6-3 1/2 x 4 1/2	122	33x4 1/2	.....	.....	1945	.....	.....	Oakland.....	34-C	6-2 1/2 x 4 1/2	115	32x4	1395	1395	.....	2065	2065
Champion.....	C4	4-3 1/2 x 5	118	32x4	1595	1595	.....	.....	.....	Ogden.....	6-60	6-3 1/2 x 5 1/2	134	.....	3750	*3900	4750	5000	
Chandler.....	Ow.	6-3 1/2 x 5	123	33x4	1895	1975	1895	2895	2995	Oldsmobile.....	45	8-2 1/2 x 4 1/2	122	33x4 1/2	.....	2100	2100	.....	3300
Chevrolet.....	490	4-3 1/2 x 4	102	30x3 1/2	795	820	.....	1325	1375	Oldsmobile.....	37-A	6-2 1/2 x 4 1/2	112	32x4	1450	1450	.....	2145	2145
Chevrolet.....	FB	4-3 1/2 x 4 1/2	110	33x4	320	1345	.....	2075	2075	Overland.....	4	4-3 1/2 x 4	100	30x3 1/2	895	895	.....	1425	1475
Chevrolet.....	40	6-3 1/2 x 4 1/2	112	32x4	1435	1435	.....	2345	2445	Owen Magnetic.....	60	6-4 1/2 x 5 1/2	142	35x5	*7000	7000	7000	8000	8500
Climber Four.....	H-S	4-3 1/2 x 5	117	33x4	1550	1550	.....	.....	.....	Packard.....	Six	6-3 1/2 x 4 1/2	116	33x4 1/2	12795	2795	.....	4150	4250
Climber Six.....	H-S	6-3 1/2 x 5 1/2	125 1/2	32x4 1/2	27.0	2750	3250	4250	4450	Packard.....	12-3	4-3 1/2 x 5	136	35x5	6000	6000	6000	8200	8450
Cole.....	870	8-3 1/2 x 4 1/2	127	33x5	3250	13250	3250	4250	4450	Paige.....	6-42	6-3 1/2 x 5	119	32x4	1770	*1700	.....	2595	2645
Colombia.....	D-C&CS	6-3 1/2 x 4 1/2	115	32x4	1945	1795	.....	2895	2895	Paige.....	6-66	6-3 1/2 x 5	131	33x4 1/2	.....	2795	3675	3750	3750
Comet.....	C-53	6-3 1/2 x 5 1/2	125	33x4 1/2	.....	2350	.....	.....	.....	Pan.....	A	4-3 1/2 x 5	108	33x4	.....	1500	.....	.....	.....
Commonwealth.....	H-S	4-3 1/2 x 5	117	32x4	1785	1595	.....	2465	.....	Pan American.....	H-S	6-3 1/2 x 5	121	33x4	2450	2450	.....	2805	3600
Crawford.....	21-6-40	6-3 1/2 x 5 1/2	122 1/2	32x4	3000	3000	3000	4500	4500	Paterson.....	650	6-3 1/2 x 4 1/2	120	33x4	.....	1895	1925	2895	2895
Crow-Elkhart.....	L53-55	4-3 1/2 x 5	117	32x3 1/2	11295	1295	.....	2195	.....	Peerless.....	56	6-3 1/2 x 5	125	34x4 1/2	.....	13200	3230	3920	4140
Crow-Elkhart.....	H53-55	6-3 1/2 x 5	117	33x4	1545	1545	.....	2395	.....	Piedmont.....	4-30	4-3 1/2 x 5	116	32x3 1/2	.....	1485	.....	.....	.....
Cunningham.....	V-3	8-3 1/2 x 5	132	35x5	.....	.....	.....	.....	.....	Piedmont.....	6-40	6-3 1/2 x 4 1/2	122	32x4	.....	1945	.....	.....	.....
Daniels.....	D	8-3 1/2 x 5 1/2	132	34x4 1/2	4850	14850	4850	6250	6950	Pierce-Arrow.....	48	6-4 1/2 x 5 1/2	142	35x5	17900	7900	8000	9000	9000
Davis.....	51-57	6-3 1/2 x 4 1/2	120	33x4	12125	2085	12250	3085	3085	Pierce-Arrow.....	38	6-4 1/2 x 5 1/2	134	34x4 1/2	7500	7500	7500	8500	9000
Dispatch.....	G	4-3 1/2 x 5	120	34x4	12900	1350	1525	1575	.....	Pilot.....	6-45	6-3 1/2 x 5	120	32x4	1945	1895	.....	2850	2900
Dixie Flyer.....	H-S-70	4-3 1/2 x 5	112	32x4	1595	1595	.....	2570	2570	Porter.....	45	4-4 1/2 x 6 1/2	142	35x5	6700	Chassis	Price	.....	.....
Dodge Brothers.....	Ow.	6-3 1/2 x 4 1/2	114	32x3 1/2	1235	1285	.....	1900	2150	Premier.....	6-D	6-3 1/2 x 5 1/2	126 1/2	32x4 1/2	4600	4600	4600	5600	6100
Dorris.....	6-80	6-4 1/2 x 5	132	33x5	.....	14785	4785	5800	6690	Premocor.....	6-40 A	6-3 1/2 x 4 1/2	117	32x4 1/2	.....	1295	.....	.....	.....
Dort.....	15	4-3 1/2 x 5	105 1/2	31x4	1215	1215	.....	1865	1905	Premocor.....	4-80	4-4 1/2 x 6	117	32x4 1/2	.....	3835	.....	.....	.....
Dupont.....	A	4-3 1/2 x 5 1/2	124	32x4 1/2	3400	13400	.....	.....	4900	Ranger.....	A-2	4-3 1/2 x 5	116	32x4	.....	1850	.....	.....	.....
Elcar.....	D.H.K.G.	4-3 1/2 x 5	117	33x4	.....	1495	1495	2095	2195	R & V Knight.....	R	4-3 1/2 x 5	115	32x4	.....	2150	.....	.....	2700
Elcar.....	D.H.K.G.	6-3 1/2 x 4 1/2	117	33x4	.....	1795	1795	2395	2495	R & V Knight.....	J	6-3 1/2 x 4 1/2	127	32x4 1/2	3350	13550	3550	.....	4400
Elgin.....	K	6-3 1/2 x 4 1/2	118	33x4	1875	1775	.....	2685	2685	Reo.....	T-6	6-3 1/2 x 5	120	33x4	1850	1850	.....	2700	2750
Essex.....	A	4-3 1/2 x 5	108 1/2	32x4	1595	1595	.....	2100	2450	Revere.....	C	4-4 1/2 x 6	131	32x4 1/2	4850	4850	14650	.....	6500
Ferris.....	Cont.	6-3 1/2 x 5 1/2	130	32x4 1/2	.....	*3350	.....	.....	.....	Roamer.....	C-6-54	6-3 1/2 x 5 1/2	128	32x4 1/2	.....	.....	.....	.....	.....
Ford.....	T	4-3 1/2 x 4	100	30x3 1/2	395	440	.....	745	795	Roamer.....	D-4-75	4-4 1/2 x 6	128	32x4 1/2	.....	.....	.....	4500	5000
Franklin.....	9-B	6-3 1/2 x 4	115	32x4	2400	2600	12500	.....	3600	Saxon.....	12	4-3 1/2 x 5	112	32x4	.....	1895	.....	2795	2795
Friend.....	Ow.	4-3 1/2 x 4 1/2	112	32x3 1/2	1585	1585	.....	2485	2585	Sayers.....	Six-42	6-3 1/2 x 4 1/2	118	33x4	2595	2195	.....	3295	3295
Grant.....	HX	6-3 1/2 x 4 1/2	116	32x4	1550	1550	.....	2450	2450	Scrymgeour.....	Six-B	6-2 1/2 x 4 1/2	115	32x4	1545	1545	.....	2215	2295
Gardner.....	Lyc.	4-3 1/2 x 5	112	32x3 1/2	11195	1105	.....	2145	.....	Seneca.....	L LeR.	4-3 1/2 x 4 1/2	108	30x3 1/2	1185	1185	.....	.....	.....
Halladay.....	M	6-3 1/2 x 5	122	33x4	.....	2285	.....	.....	3250	Severin.....	Six	6-3 1/2 x 5 1/2	122	32x4	.....	2400	.....	.....	.....
Handley-Knight.....	Knight	4-4 1/2 x 4 1/2	125	32x4 1/2	.....	2985	.....	.....	.....	Sheridan.....	4	4-3 1/2 x 5	116	33x4	1685	1685	.....	.....	.....
Hanson.....	54	6-3 1/2 x 4 1/2	121	32x4	2365	2365	2465	2885	2885	Sheridan.....	8	8-3 1/2 x 4 1/2	132	33x5	.....	.....	.....	.....	.....
Halford.....	H-S	4-3 1/2 x 5	115	32x4	1695	1695	.....	.....	.....	Singer.....	Series 20	6-2 1/2 x 5	138	33x5	6500	16500	6500	.....	8600
Haynes.....	47	6-3 1/2 x 5	132	34x4 1/2	12685	2935	2935	3650	4250	Skelton.....	35	4-3 1/2 x 5	112	32x3 1/2	1245	1245	.....	.....	.....
Haynes.....	48	12-2 1/2 x 5	132	34x4 1/2	13635	3635	4350	4950	.....	Standard.....	I	8-3 1/2 x 5	127	34x4 1/2	.....	.....	.....	.....	.....
Huffman.....	R	6-3 1/2 x 4 1/2	120	32x4	1995	1995	.....	2975	.....	Stanley Steamer.....	Ow.	2-4 1/2 x 5	130	34x4 1/2	.....	3950	3950	5650	5775
H.C.S.....	Weid.	4-3 1/2 x 5 1/2	120	32x4 1/2	2025	12975	.....	.....	.....	Stanwood Six.....	Cont.	6-3 1/2 x 4 1/2	118	33x4	.....	2050	.....	.....	.....
Hollier.....	206-B	6-3 1/2 x 4 1/2	120	32x4	.....	1985	.....	.....	.....	Stearns.....	SKL4	4-3 1/2 x 5 1/2	125	34x4 1/2	2550	2450	2675	3100	3700
Holmes.....	Ow.	6-3 1/2 x 4 1/2	126	34x4 1/2	13350	.....	3350	4250	4500	Stephens.....	89	6-3 1/2 x 4 1/2	122	33x4 1/2	2400	12400	2400	3400	3400
Hudson Super 6																			

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
A. & B. 3T	3	.....	5 1/2 x 4 1/2	48x3 1/2	48x3 1/2	I	Corbitt, B	2 1/2	\$3650	4 1/2 x 5 1/2	36x4	36x4d	W	Gramm, 10	1	\$1495	3 1/2 x 5	33x5 1/2	33x5 1/2	B
A. & B. 5T	5	.....	5 1/2 x 5 1/2	48x3 1/2	48x5d	I	Corbitt, A	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x10	W	Gramm, 15	1 1/2	2050	3 1/2 x 5	36x3 1/2	36x5	I
Acason, R	1	.....	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Corbitt, AA	5	5500	4 1/2 x 6	36x6	40x6d	W	Gramm, 65	1 1/2	2725	3 1/2 x 5	36x3 1/2	36x5	W
Acason, R B	1 1/2	.....	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Couple Gear, HC	3 1/2	6100	5 1/2 x 5 1/2	x 4	x 4d	W	Gramm, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Acason, H	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W	Couple Gear, AC	5	6700	5 1/2 x 7	x 5	x 5d	W	Gramm, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4d	W
Acason, L	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10d	W	Couple Gear, LD	7	7450	5 1/2 x 7	x 5	x 5d	W	Gramm, 35	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W
Acason, M	5	.....	5 x 6 1/2	36x6	40x6d	W	Dart, S	1 1/2	2250	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Gramm, 50	5	5275	4 1/2 x 6	36x6	40x6d	W
Ace, C	1 1/2	\$2750	3 1/2 x 5 1/2	34x3 1/2	34x5*	W	Dart, M	2 1/2	3000	4 1/2 x 5 1/2	36x4	36x7	W	Grant, 17	1 1/2	2675	3 1/2 x 5	35x5 1/2	38x7 1/2	I
Ace, A	2 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Dart, W	3 1/2	4000	4 1/2 x 6	36x5	36x10	W	Hahn, J4	1	.....	3 1/2 x 5	36x3 1/2	36x5	W
Ace	3	3650	4 1/2 x 5 1/2	36x6	36x8	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Acme, B	1	2175	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Hahn, DE	2	.....	4 1/2 x 5 1/2	36x4	36x7	W
Acme, F	1 1/2	2475	3 1/2 x 5	34x3 1/2	34x5	W	Day-Elder, C	2	2750	4 1/2 x 5 1/2	36x4	36x6	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Acme, A	2	3050	4 1/2 x 5 1/2	36x4	36x7*	W	Day-Elder, D	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W
Acme, C	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x10*	W	Day-Elder, E	3 1/2	3700	4 1/2 x 5 1/2	36x5	36x5d	W	Hahn, EF	5 1/2	.....	4 1/2 x 6	36x6	40x12	W
Acme, E	5	5150	4 1/2 x 6	36x6	40x12*	W	Day-Elder, F	5	4600	4 1/2 x 6	36x5	40x6d	W	Hal-Far, E	1	2250	4 x 5	35x5 1/2	35x7 1/2	W
Air-O-Flax, C	1 1/2	.....	3 1/2 x 5 1/2	36x3 1/2	36x5	I	Dearborn, F	1 1/2	2180	3 1/2 x 5	34x4*	34x5*	W	Hal-Far, B	2 1/2	3250	4 1/2 x 5 1/2	35x5 1/2	38x7	W
AB-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Dearborn, 48	2	2590	3 1/2 x 5 1/2	34x4 1/2	34x7	W	Hall	2 1/2	.....	4 1/2 x 5 1/2	36x4 1/2	36x4 1/2	W
AB-American, B-1	1	1795	3 1/2 x 5	32x4	32x4	I	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	36x6 1/2	I	Hall	3 1/2	.....	4 1/2 x 5 1/2	36x5 1/2	36x5 1/2	W
AB-American C-1 1/2	1 1/2	2195	3 1/2 x 5	34x4	34x5	I	Defiance, E	2	2750	3 1/2 x 5	35x5 1/2	38x7 1/2	I	Hall	5	.....	4 1/2 x 5 1/2	36x5	40x6 1/2	W
American, 40	4	4575	4 1/2 x 6	36x5	36x10	W	DeKalb, E2	2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5*	W	Hall	7	.....	4 1/2 x 5 1/2	36x5	40x6d	C
Aper, C	1	1745	3 1/2 x 5 1/2	33x4 1/2	32x3 1/2	I	DeKalb, E2 1/2	2 1/2	2600	4 1/2 x 5 1/2	36x4*	36x6*	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Aper, D	1 1/2	1915	3 1/2 x 5 1/2	32x3 1/2	32x4	I	Donby, 12	1	2400	3 1/2 x 5	35x5*	36x6*	I	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Aper, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x6	I	Donby, 134	2	2800	3 1/2 x 5	36x3 1/2	36x6	I	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36x5	36x5d	W
Armstrong, HW	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x4d	W	Donby, 25	3	3600	4 1/2 x 5 1/2	36x4	36x7	I	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6d	W
Armstrong, KW	3 1/2	.....	4 1/2 x 6	36x5	36x5d	W	Donby, 27	4	4600	4 1/2 x 5 1/2	36x5	36x5d	I	Hawkeye, K	1 1/2	2365	3 1/2 x 5	34x3 1/2	34x5*	I
Armstrong, 20	1	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Donby, 210	5	5350	4 1/2 x 5 1/2	36x6	36x6d	I	Hawkeye, M	2	2915	4 1/2 x 5 1/2	36x4*	36x6*	I
Atco	1 1/2	2450	3 1/2 x 5 1/2	34x5*	36x6*	W	Dependable, A	5 1/2	16 0	3 1/2 x 5	34x5	36x6	W	Hawkeye, N	3 1/2	.....	4 1/2 x 6	37x7 1/2	44x10 1/2	I
Atlas, 1	2 1/2	3150	4 1/2 x 5 1/2	36x4*	36x7*	W	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Handrichson	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Dependable, D	2	2650	4 1/2 x 5 1/2	34x5	36x6	W	Handrichson	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W
Atterbury, 7CX	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4d	W	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Handrichson	5	5400	5 x 6	36x6	40x6d	W
Atterbury, 7D	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5d	W	Dependable, G	3 1/2	35 0	4 1/2 x 6	36x6	38x7	W	Highway, A 410	4	.....	4 x 6	36x5	36x6d	W
Atterbury, 8E	5	5975	4 1/2 x 6	36x5	40x6d	W	Diamond-T, T	1 1/2	2450	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Highway, B 510	5	.....	4 x 6	36x5	40x6d	W
Autocar, 21UP	2	2300	4 1/2 x 4 1/2	34x4	34x5	D	Diamond-T, FS	1 1/2	2715	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Higdon, A18	1	2100	3 1/2 x 5	35x5	35x5	W
Autocar, 21UG	2	2400	4 1/2 x 4 1/2	34x4	34x5	D	Diamond-T, U	2	2835	4 x 5 1/2	36x4	36x7	W	Higdon, B20	1 1/2	2500	4 1/2 x 5 1/2	34x5	36x6	W
Autocar, 10	5	2100	3 1/2 x 5	34x10	.....	I	Diamond-T, K	3 1/2	3925	4 1/2 x 5 1/2	36x5	36x5d	W	Hoffman, B	1 1/2	2075	3 1/2 x 5	34x3 1/2	34x6	W
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	35x5 1/2	38x7 1/2	W	Diamond-T, EL	5	4615	4 1/2 x 5 1/2	36x6	40x6d	W	Hoffman, C	1 1/2	1875	3 x 5 1/2	34x3 1/2	34x6	I
Available, H2 1/2	2 1/2	3475	4 1/2 x 5 1/2	36x4*	36x8	W	Diamond-T, S	5	4800	4 1/2 x 6	36x6	40x6d	W	Hurlbert	1 1/2	2850	4 x 5 1/2	34x4	34x5	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x10	W	Diels, A	1	.....	3 1/2 x 5	34x4 1/2	34x5	W	Hurlbert	2 1/2	3750	4 1/2 x 5 1/2	36x4	36x4d	W
Available, H5	5	5575	4 1/2 x 6	36x6	40x12	W	Doane	2 1/2	4100	4 1/2 x 5 1/2	36x5	36x7	C	Hurlbert	3 1/2	4400	4 1/2 x 6	36x5	36x5d	W
Available, H7	7	6875	5 x 6 1/2	36x6	40x14	D	Doane	3 1/2	5100	4 1/2 x 5 1/2	36x5	36x5d	C	Hurlbert	5	5250	4 1/2 x 6	36x5	40x6d	W
Avery	1	.....	3 x 4	34x5 1/2	34x5 1/2	I	Dodge Brothers	3 1/2	1085	3 1/2 x 4 1/2	33x4	33x4	B	Indep't (Iowa), E	1 1/2	2040	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Beck, A.R.	1	1800	3 1/2 x 5	34x3 1/2	34x4	I	Dorris, K-4	2	3400	4 1/2 x 5 1/2	36x4*	36x7*	W	Indep't (Iowa), F	2	2495	4 1/2 x 5 1/2	34x4	34x6	I
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	I	Dorris, K-7	3 1/2	4400	4 1/2 x 5 1/2	36x5*	36x10*	W	Indep't (Iowa), F	1	1885	3 1/2 x 5	34x3 1/2	34x4	W
Bell, O	2 1/2	.....	4 1/2 x 5 1/2	34x4	34x7*	I	Douglas, G	1 1/2	2050	3 1/2 x 5 1/2	34x3 1/2	34x5	I	Indep't (Ohio), F	1 1/2	2545	3 1/2 x 5	36x3 1/2	36x5*	W
Bell, E	1 1/2	.....	3 1/2 x 5 1/2	35x5	36x6	I	Douglas, H	2	2580	4 1/2 x 5 1/2	34x4	36x7	I	Indep't (Ohio), H	3 1/2	3285	4 1/2 x 5 1/2	36x4*	36x4d*	W
Belmont, A	1 1/2	.....	3 1/2 x 4 1/2	31x4	.....	I	Douglas, I	3	3250	4 1/2 x 5 1/2	36x5	36x8	W	Indep't (Ohio), K	3 1/2	4235	4 1/2 x 5 1/2	36x5	36x5d	W
Belmont, B	1 1/2	.....	3 1/2 x 5 1/2	34x4 1/2	34x5	I	Duplex, Limited	1 1/2	2775	4 x 5 1/2	35x5 1/2	38x7 1/2	I	Indians, 12	1 1/2	2220	3 1/2 x 5 1/2	34x		

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL							Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL							Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	
										Front	Rear												Front	Rear		
K-Z	1	\$2250	3 1/2 x 5	34x3 1/2	34x5	W	Parker, F20	3 1/2	\$4400	4 1/2 x 6	36x5	40x5d	W	Success, B	2 1/2	\$2850	4 1/2 x 5 1/2	34x4	36x7	W						
K-Z	1 1/2	2750	3 3/4 x 5	36x4	36x6	W	Parker, M20	5		4 1/2 x 6	36x6	40x6d	W	Sullivan, F	1 1/2	2350	3 3/4 x 4 1/2	36x4	36x5	W						
K-Z	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x8	W	Piedmont, 4-30	1 1/2	1785	3 1/2 x 5	34x4	34x4	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4	36x7	W						
K-Z	3 1/2	4250	4 1/2 x 5 1/2	36x5	40x10	W	Pierco-Arrow	2	3750	4 1/2 x 5 1/2	36x4	36x4d	W	Sullivan, H	3 1/2	4650	4 1/2 x 6	36x5	36x5d	W						
K-Z	5	5200	4 1/2 x 5 1/2	36x6	40x6d	W	Pierco-Arrow	3 1/2	4950	4 1/2 x 5 1/2	36x5	36x5d	W	Superior, D	1	1800	3 3/4 x 5	34x4 1/2	34x4	W						
Lange, B	2	3000	4 1/2 x 5 1/2	36x4	36x6	C	Pierco-Arrow	5	5700	4 1/2 x 5 1/2	36x5	40x6d	W	Superior, E	2	2750	4 1/2 x 5 1/2	36x4	36x6	W						
Larrabee, U	1 1/2	2400	3 3/4 x 5	34x3 1/2	34x5	W	Pioneer, B	1	2190	3 3/4 x 5 1/2	36x3	36x5	W	Super Truck, 50	2 1/2		4 x 6	36x4	36x8	W						
Larrabee, K	2 1/2	3400	4 1/2 x 5 1/2	36x4	36x7	W	Pioneer, N	1 1/2	2790	3 3/4 x 5 1/2	36x3 1/2	36x6	W	Super Truck, 70	3 1/2		4 1/2 x 6	36x5	40x5d	W						
Larrabee, L	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Pioneer, F	2	3190	4 1/2 x 5 1/2	36x4	36x7	W	Super Truck, 100	5		4 1/2 x 6	36x5	40x6d	W						
Larrabee, W	5	5100	4 1/2 x 6	36x6	40x6d	W	Pioneer, A	3 1/2	4190	4 1/2 x 5 1/2	36x5	36x5d	W	Super Truck, 150	7 1/2		5 x 6	36x6	40x7d	W						
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Pioneer, J	5	4990	4 1/2 x 5 1/2	36x6	40x6d	W													
Lone Star	1 1/2	1745	3 1/2 x 5	34x4	34x5	W	Pittsburgh, B	2 1/2		4 1/2 x 5 1/2	36x5	36x7	W	Texas, A38	3 1/2		3 1/2 x 5	34x4	33x4	I						
Luedinghaus, K-S	2	2790	4 1/2 x 5 1/2	36x4	36x7	W	Pony	1 1/2	320	2 1/2 x 4	28x3 1/2	28x3 1/2	W	Texas, TK39	1 1/2		3 1/2 x 5	36x6	36x7	W						
Luedinghaus, KL	2	2890	4 1/2 x 5 1/2	36x4	36x7	W	Power, C	1 1/2		3 1/2 x 5 1/2	36x6	36x6	W	Texas, TK	1 1/2		3 1/2 x 5	36x6 1/2	36x7 1/2	W						
Luedinghaus	1 1/2		3 1/2 x 5 1/2	34x3 1/2	34x5	W	Power, F	3 1/2	4360	4 1/2 x 5 1/2	36x5	40x10	W	Tiffin, GW	1 1/2	2695	4 1/2 x 5 1/2	36x4	36x5	W						
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x6	W	Premcar, B 143	1 1/2	2350	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36x4	36x3 1/2	W						
Maccar, H	2 1/2	3750	4 1/2 x 5 1/2	36x4	36x4d	W	Rainier, R-11	1 1/2	2150	3 1/2 x 5	36x5	36x5	W	Tiffin, PW	3 1/2	4760	4 1/2 x 5 1/2	36x5	36x5d	W						
Maccar, M-2	3 1/2	4500	4 1/2 x 6	36x5	36x5d	W	Rainier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5d	W	Tiffin, TW	6	5850	4 1/2 x 6	36x6	40x6d	W						
Maccar, G	5	5500	4 1/2 x 6	36x6	40x6d	W	Rainier, R-19	1	2350	3 1/2 x 5	34x3 1/2	34x5	W	Tiffin, UW	6	6050	4 1/2 x 6	36x6	40x12	W						
Mack, AB	1 1/2	3450	4 x 5	36x4	36x3 1/2	D	Rainier, R-16	1 1/2	2800	3 1/2 x 5	34x3 1/2	34x5	W	Titan, Transport	3 1/2	4550	4 1/2 x 6	36x5	40x5d	I						
Mack, AB	1 1/2	3000	4 x 5	36x4	36x3 1/2	D	Rainier, R-18	2	2950	4 1/2 x 5 1/2	36x4	36x6	W	Titan, S-Ton	6	5400	4 1/2 x 6	36x5	40x6d	I						
Mack, AB	2	3750	4 x 5	36x4	36x4d	C	Ranger, TK-20-2	2	2575	3 1/2 x 5	34x3 1/2	34x5	W	Titan	2 1/2	3400	4 1/2 x 5 1/2	36x4	36x4d	I						
Mack, AC	3 1/2	4950	5 x 6	36x5	40x5d	C	Ree, F	1 1/2	1385	4 1/2 x 5 1/2	34x4 1/2	34x4 1/2	B	Tower, J	1 1/2	3000	4 1/2 x 5 1/2	36x5	36x7	W						
Mack, AC	5	5500	5 x 6	36x6	40x6d	C	Reliance, 10A	1 1/2	2500	4 x 5 1/2	36x3 1/2	36x5	I	Tower, H	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W						
Mack, AC	6 1/2	5750	5 x 6	36x6	40x7d	C	Reliance, 10B	2	2825	4 x 5 1/2	36x6 1/2	36x7	I	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x5	W						
Mack, AC	7 1/2	6000	5 x 6	36x6	40x12	C	Reliance, 20B	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x4d	I	Traffic, C	2	1105	3 1/2 x 5	34x3 1/2	34x5	I						
Mack Trac, AB	5	3400	4 x 5	36x4	36x4d	C	Reliance, 20C	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x4d	I	Transport, 20	1	1850	3 1/2 x 5	34x3 1/2	34x4	I						
Mack Trac, AC	7	4950	5 x 6	36x5	40x5d	C	Republic, 10	1	1615	3 1/2 x 5	34x3	34x4	I	Transport, 30	1 1/2	2250	3 1/2 x 5	36x3 1/2	36x5	I						
Mack Trac, AC	10	5500	5 x 6	36x6	40x6d	C	Republic, 11X	1 1/2	2195	3 1/2 x 5	34x3 1/2	34x5	I	Transport, 50	2 1/2	2785	4 1/2 x 5 1/2	36x4	36x7	I						
Mack Trac, AC	13	5750	5 x 6	36x6	40x12	C	Republic, 19	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	I	Transport, 70	3 1/2	4195	4 1/2 x 6	36x5	36x10	I						
Mack Trac, AC	15	6000	5 x 6	36x7	40x7d	C	Republic, 20	3 1/2	3845	4 1/2 x 5 1/2	36x5	36x10	I	Traylor, B	1 1/2	2075	3 1/2 x 5 1/2	34x3 1/2	34x5	W						
Master, JW	1 1/2	2690	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Riker, B	3	4600	4 1/2 x 6	36x5	36x5d	W	Traylor, C	2	2875	4 1/2 x 5 1/2	36x4	36x7	W						
Master, W	2 1/2	3290	4 1/2 x 5 1/2	34x4	36x7	D	Riker, BB	4	4700	4 1/2 x 6	36x5	36x6d	W	Traylor, D	3	3375	4 1/2 x 5 1/2	36x4	36x8	W						
Master, D	2 1/2	3540	4 1/2 x 5 1/2	34x4	36x7	W	Rock Falls, 9	1 1/2	2800	3 1/2 x 5 1/2	34x3 1/2	35x5 1/2	B	Triangle, AA	3	1600	3 1/2 x 5	35x5 1/2	35x5 1/2	I						
Master, A	3 1/2	4190	4 1/2 x 6	36x5	40x5d	W	Rowe, CW	1 1/2	4508	4 1/2 x 6	36x5	36x6d	W	Triangle, A	1 1/2	2150	3 1/2 x 5 1/2	34x3 1/2	34x6	I						
Master, E	3 1/2	4640	4 1/2 x 6	36x5	40x5d	D	Rowe, HW	4	4508	4 1/2 x 6	36x5	36x6d	W	Triangle, C	2	2700	3 1/2 x 5 1/2	36x4	36x6	I						
Master, B	5	5290	4 1/2 x 6	36x6	40x6d	W	Rowe, C.D.W.	2	3300	4 x 5	34x4	36x3 1/2	W	Triangle, B	2 1/2	2950	4 x 5 1/2	36x4	36x7	I						
Master, F	5	5440	4 1/2 x 6	36x6	40x6d	D	Rowe, G.S.W.	3	4150	4 x 6	34x5	36x5d	W	Triumph, H	1 1/2	2400	3 1/2 x 5 1/2	36x3 1/2	36x5	W						
Master Trac, T	6	3740	4 1/2 x 5 1/2	34x4	36x4d	D	Rowe, G.P.W.	3	5250	3 1/2 x 5 1/2	37x7	42x9 1/2	W	Triumph, HB	2	2910	3 1/2 x 5 1/2	36x4	36x7	W						
Maxwell, 1 1/2	1 1/2	1332	3 1/2 x 4 1/2	32x3	32x4	W	Rowe, F.W.	5	5500	4 1/2 x 6	36x6	40x6d	W	Twin City, B	3 1/2	4750	5 1/2 x 6	36x6	36x6	I						
Menominee, HT	1	2080	3 1/2 x 5	34x3 1/2	36x5	W	Rumely	1 1/2		3 1/2 x 5 1/2	36x3 1/2	36x5	W	Twin City, A	5	5250	5 1/2 x 6	36x7	36x7	I						
Menominee, H	1 1/2	2725	4 x 5	36x4	36x5	W	Samson, 15	3 1/2	865	...	32x4	32x4	B	Ultimate, A	2	3200	4 x 5 1/2	36x3 1/2	36x5	W						
Menominee, D	2	3245	4 x 6	36x4	36x4d	W	Samson, 25	1 1/2	1185	...	35x5	35x5	B	Ultimate, AJ	3	3450	4 1/2 x 5 1/2	36x4	36x5	W						
Menominee, G	3 1/2	4270	4 1/2 x 6	36x5	36x5d	W	Sandow, G	1	2195	3 1/2 x 5	34x3 1/2															

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

Vol. LXVI

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No. 4

Does the Driver Realize He's in the Car, Too?



Turn to Page 12 and Read "The Dealer's Contract"

It's Time to SELL—

Selling, Not Buying, Is Going to Move Cars in 1921—A Brooklyn Dealer Has Worked Out a Wonderful, Yet Simple, Selling System—Read About It.

IT'S time to SELL!

It has been time to sell since those days of 1920 when the people rebelled against war prices of everything—and stopped buying everything, including automobiles.

Some dealers realized it soon after the buyers' strike started.

Some are just beginning to realize it now. **AND NOW IS NOT TOO LATE.**

There are indications that the public is **GETTING TIRED OF WAITING** and is **GETTING READY TO BUY**. The shows are arousing interest and desire to own new cars. The first spring zephyrs will start the flood.

But why wait? It's time to **SELL** today and tomorrow and every day.

Shows and spring zephyrs are nice and will help, but—**REAL OLD SHIRT-SLEEVES MERCHANDISING—WORK—MUST BE THE FOUNDATION** upon which the industry builds its 1921 sales.

It's TIME TO SELL—NOW!



910 Prospects in 2 Months

In less than two months—in the "depression period" of 1920—a combined educational and sales effort unearthed 910 prospects for Bishop, McCormick & Bishop, Brooklyn Dodge Brothers dealers. The effort got the firm back into its 1919 stride

LAST August Bishop, McCormick & Bishop, Inc., Dodge Brothers dealer in Brooklyn was 1,000 deliveries behind orders and striving to satisfy an unprecedented and apparently unquenchable demand.

Thirty days later there were unsold cars on the sales-room floor—and **ALMOST NO DEMAND.**

It was time to sell!

THERE were conferences, plans—**THEN ACTION.**

The drooping sales curve shot upward again, and by the middle of November, Bishop, McCormick & Bishop, Inc., was **SELLING**. *Selling in its 1919 stride.* That month's sales record in the 1920 "depression" period fell only one car short of the same month the previous year in a period of "riotous ante-bellum spending." December also compared favorably.

This story tells **HOW**. It tells how this sound, conservative dealer organization fought depression and doubt with faith and work—and triumphed. It is a story of those darkest days of 1920 when the automobile industry suffered from the nation-wide reaction of a price-weary public—a business romance with a merchandising heart-throb.

It's the story of how Bishop, McCormick & Bishop, Inc., got **back to selling** when the withering blast of public sentiment against war prices swept

Confidence



The entrance to Bishop, McCormick & Bishop's beautiful building in Brooklyn. It symbolizes strong characteristics of the firm's merchandising policy

the country and motor car orders shriveled into cancellations under its blighting influence.

The firm had earned a "place in the sun" among leading Dodge Brothers dealers. It was known as a sound, conservative merchandising organization. Years of business in Brooklyn had given it a standing in the community. The dignity and stability of the institution must be maintained—**IT WAS TIME TO SELL.** But, **HOW?**

"We felt," says C. M. Bishop, general manager, "that the public had tasted blood in the slashing of prices, and that it would be determined to have more and more blood unless we could divert its interest to some of the sounder and saner things of life."

Thus, the problem became one of diverting public opinion from depression and price thoughts and directing it toward this firm's confidence in itself and in its products. It was one of building public con-

fidence by COUPLING THE NATIONAL REPUTATION OF THE MANUFACTURERS WITH THE CHARACTER AND REPUTATION OF THE LOCAL DEALER.

To accomplish this it was planned to do these things:

- 1—Get people thinking about and talking about—
 - (a) Dodge Brothers
 - (b) Bishop, McCormick & Bishop.
- 2—Attract people into the salesroom—away from the depression of home or office and into a buying atmosphere
- 3—Resell the fine character and reputation of the firm to insure that the people would believe the story they had to tell them.
- 4—Utilize every possible ounce of man power, inside or outside the organization, in scouting for business.

But, it was felt that these things should be accomplished so far as possible without disturbing the existing organization, which time and training had built into an efficiently functioning machine.

Furthermore, it was felt that the effort must be in harmony with those ideals that had been developed by the firm—in harmony with the character of the firm as imprinted on the minds of the buying public through years of contact.

For a long time the Brooklyn Dodge Brothers dealer had conducted a school for its owners and had a highly developed educational department. It was decided that this educational feature of the business was the rock upon which a suitable selling effort should be built.

The question of how to get people into the salesroom was answered by throwing the school facilities open to owners of all makes of cars. The construction of the building, which makes it necessary for persons entering it to pass through the salesroom lent effectiveness.

The "School of Motor Car Ownership" was announced in attractive folders, which were sent to a list of 10,000 selected names, and in the local newspapers. The first meeting brought more than 500 persons into the establishment, most of whom had visited the place for the first time. Every visitor registered and most of them lingered to chat IN THE SALESROOM with the salesmen.

THE FOLLOWING DAY THERE WERE EIGHT SALES. And the next day there were eight more. This demonstrated that the educational feature WOULD attract and that there was plenty of business to be had if it could be attracted—if it could be brought into a BUYING ATMOSPHERE.

In order to arouse public interest and to get the public talking about Bishop, McCormick & Bishop, and to sell the character and reputation of the firm in a way that would build public confidence, a "teaser" campaign of newspaper publicity, followed by a historical campaign, was planned.

The number 1221, on the front of the building on Bedford Avenue, was the "teaser." It appeared alone several times and then was developed gradually until the identification was complete and the historical copy began running.

Up to this point the first three steps to back up the selling process had been successfully negotiated. The school of motor car ownership had brought people

every ounce of sales ability in the organization. The house-to-house canvass was considered, but it was believed to have its drawbacks, except commercial car canvassing, which always had been done.

Then, one day, C. M. Bishop pegged a map of Brooklyn with the addresses of the firm's 125 employees outside of the sales department. He found that they

A "How to Know" Exposition That Is SELLING Used Cars



Confidence in its used cars was inspired by Bishop, McCormick & Bishop through a showroom display that "laid the cards on the table" for used car prospects. There was no direct selling effort. The display was made as a purely educational feature—but when people saw they wanted to buy. The "How to Know" Exposition sold 18 used cars the first two weeks

into the salesroom—into a buying atmosphere. The "teaser" campaign had got people interested in and talking about Bishop, McCormick & Bishop, Inc. The historical advertising had helped to SELL the character and reputation of the firm in a way that built public confidence.

The next step was the marshalling of

lived in practically every section. The decision was made—EVERY MEMBER OF THE ORGANIZATION WOULD HELP TO SELL. The force was divided into ten teams, as equally balanced as possible in selling strength. Everybody from department heads to the porters was on one of them. There were morning meetings at which the idea was sold

to the organization. And this was the idea: The success of the organization was dependent upon each of its members. People must think about Bishop, McCormick & Bishop and Dodge Brothers when they think about automobiles. The way to make them do this is to mention Dodge Brothers and Bishop, McCormick & Bishop at every opportunity. Prospects were to be turned in for the attention of the regular selling force of 20

DIDN'T HAPPEN TO BE THEIR JOB TO WORRY ABOUT SELLING.

The plan soon began to produce results. One of the shop boys unearthed one of the first sales. He had written a simple little letter to a friend. It went something like this: "Dear Jack: You know I'm working for Bishop, McCormick & Bishop, down on Bedford Avenue. They sell Dodge Brothers cars. I've got a good job with lots of promise

their dads and their sweethearts. Several live prospects were developed. The 125 individual members of the organization were saying "Bishop, McCormick & Bishop" and "Dodge Brothers" at every possible opportunity in nearly a hundred different neighborhoods of Brooklyn. It was a simple, intimate appeal—it got home.

The first day developed 36 car prospects. Within a week they were piling in in amazing numbers. The sales force was kept busy following them up, and taking care of the business they developed themselves. In a month the sales force was swamped with prospects.

The contest ran for six weeks, to Jan. 1. At the close the results showed:

Total prospects secured	....910
Prospects canvassed	.....547
Live prospects	.....338
Dead prospects	.....209
Sales	.....26

This means that at the end of the two months of the 547 prospects actually "seen" 61 per cent developed into LIVE prospects, in addition to the 26 sales. It will take the salesmen at least another month to "mop up" the remaining prospects—then the winning team will be announced.

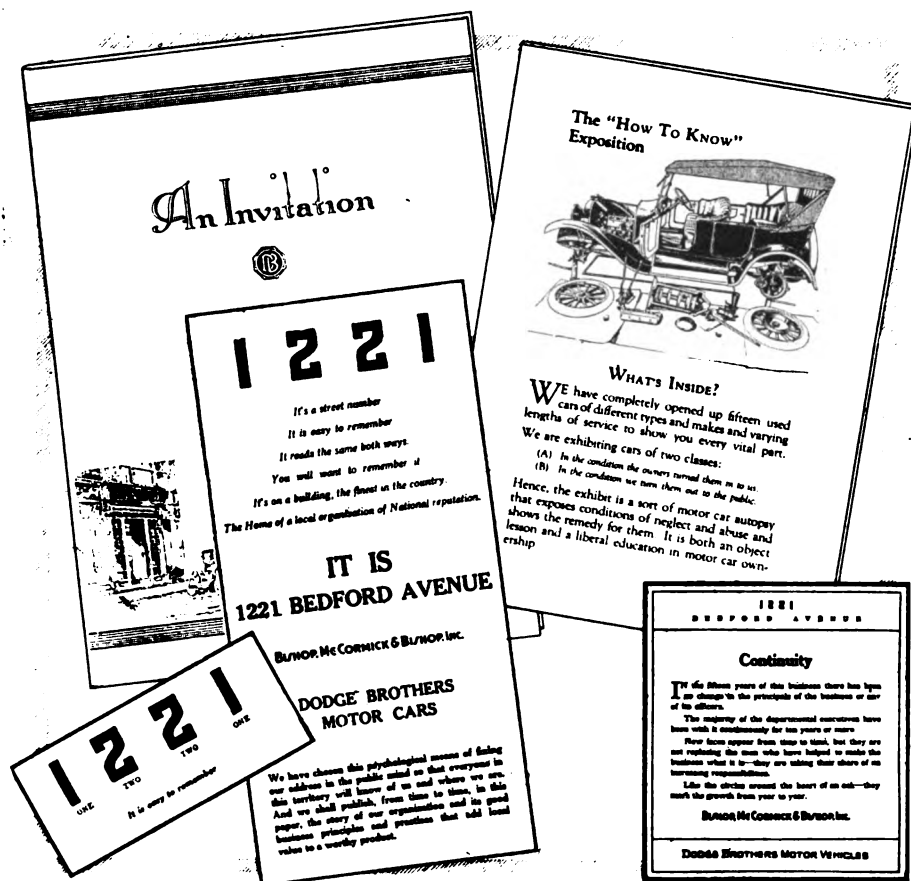
But the plan produced results that cannot be shown in figures. It carried the name of Bishop, McCormick & Bishop, Inc., into thousands of Brooklyn homes and business offices. Coupled with the advertising and the educational features it SOLD the character of the firm to thousands more. It stimulated the interests of the individual employees in the success of the business—strengthened their morale and accomplished miracles in improving the courtesy and interest with which employees handle every phase of their relations with the public.

With the prospect list increased and the organization selling it was not long before Bishop, McCormick & Bishop, Inc., realized that it must solve the used car problem. It was obvious that trade-ins must be made if the firm was to sell all the new cars it had prospects for.

Again the educational idea of the Bishop, McCormick & Bishop merchandising plan was put to work. The idea was to SELL the public the same confidence in the used cars offered by the firm that it held in the firm and in its new cars. It was a job of selling the public on the idea that if it bought a used car from Bishop, McCormick & Bishop, Inc., it would surely get full value—it was insured satisfaction.

The practical application of the plan was a "How to Know" exposition. The large commercial car salesroom, on the second floor of the building, was made a big used car silent salesman. Used cars of several makes were displayed stripped to their vital parts. Some were shown in the condition the owners turned them in. Others were shown in the condition they were placed before being offered for resale. Visitors were instructed by salesmen in what to look for in purchasing used cars. The exhibit was a sort of motor car autopsy that exposed conditions of neglect and abuse and showed

Some of the Ads That Sold Confidence



Above are shown some of the ads used by Bishop, McCormick & Bishop in its newspaper and mail appeal in building public confidence. Two of the "1221" teaser ads are shown. The small one was about the third to appear. The larger one revealed the "mystery" after it had run for about two weeks in Brooklyn papers. In the lower right corner is shown one of the historical series of ads that followed the teaser campaign. The invitation form was used to announce the "School of Motor Car Ownership." The "How to Know" Exposition folder was mailed to a large list of used car prospects and others

men. Suitable prizes were offered for the teams turning in prospects that resulted in the largest number of sales. In addition, \$5 was given by the salesman to each contestant who handed in a prospect that resulted in a sale.

The organization went to work. They surprised themselves with the number of prospects they unearthed. They found that there were people among their acquaintances that really were thinking about buying an automobile—and these people just hadn't been approached before. They found that they had been neglecting to give their firm the merchandising assistance that was within their power—JUST BECAUSE IT

of advancement and I'm just crazy about the automobile business. The boss has put me on a team to help the salesmen sell cars. There's prizes and everything. It really means a whole lot to me because I want to make good, and the boss has assured us that if we show, in this contest, that we are worthy of bigger jobs, we are going to get them. Maybe you know somebody who is thinking about buying a new car, or who will be soon. You'll sure do me a big favor if you send me his name."

The simple, homely little appeal produced a sale within two weeks.

A stenographer wrote letters to a lot of her girl friends. They talked to



Dealer Organization That Turned in 910 Prospects in Two Months

Everybody from department head to porter was on one of the Bishop, McCormick & Bishop teams. They wrote letters, talked Dodge Brothers cars and secured prospects, and not one of them lost a minute from his regular job to do it. This shows only half of 'em—the rest are at the bottom of this page

how they could be remedied. It was both an object lesson and a liberal education in motor car ownership. Instructors from the educational department and the service department were on hand to answer questions and explain the exhibits.

People were not asked to come in and buy the cars. There was no direct selling effort exerted in the approach of spectators. The atmosphere was purely educational. But—people were unconsciously being led to the realization of the fact that Bishop, McCormick & Bishop, Inc. was a mighty good place to purchase used cars. Used car prospects were treated on the same high plane that new car prospects were. They were extended the same interested co-operation and all the privileges of new car buyers.

The exhibition of the Bishop, McCormick & Bishop way of handling used cars impressed the fact that the cars offered for sale were exceptional values. It was a big temptation to buy—and that's what visitors did. They asked the salesmen to sell them certain cars. And,

as these cars were sold more were opened up and placed on the floor.

The exhibit developed more used car

The BIG Idea

IF you have not read this story of how Bishop, McCormick & Bishop, Dodge Brothers dealer in Brooklyn, not only got BACK TO SELLING but SWAMPED ITS SELLING FORCE with 910 prospects when everybody was talking "depression" last November and December—READ IT NOW.

The merchandising plan presented in this story is particularly interesting because it is applicable in whole or in part in every automobile dealer business. It can be made as relatively successful in a 20-man organization as in one with 125 or 1000.

READ THE STORY.

prospects than at any other season in the history of the business—and during a period when it was pretty well agreed in the industry that there was NO USED CAR MARKET.

IT SOLD 19 USED CARS IN DECEMBER, the first month it was in operation, AT A PROFIT. This dealer had solved its biggest merchandising problem, the sale of used cars without loss to make way for new car sales.

To-day Bishop, McCormick & Bishop feel that they have done 90 per cent of the promotion work that will be necessary for the next two years. They have enough new car prospects to carry them through three or four months of the spring season if not a single name were added to the list; and they have more used car prospects in sight than they ever had before in the history of the business, in spite of the fact that two salesmen have been added to the Used Car Department for strictly outside solicitation and follow-up. They are over the hill—well over it.



THE DEALER CONTRACT

Lack of Stable Manufacturer-Dealer Relations Is the Principal Cause of Bankers' Coldness to Dealers' Appeals for Financial Support, Says a Big Distributer—And He Thinks the Manufacturers' "Utility" Propaganda Is Just a Smoke Screen

BANKERS are pretty well sold on the stability of the automotive industry, but some of them are inclined to question the stability of the automotive merchandiser, in the opinion of a successful distributor who has given Motor World his views for publication.

This distributor, head of one of the most successful automotive sales organizations in Canada, thinks that lack of solidity in the dealer's contract relations with the manufacturer is the main reason for the banker's attitude of carefulness when approached by a dealer for credit. What he thinks is perhaps of more than ordinary interest because he had won a notable success in another field of business before he undertook the sale of automobiles.

IT is this distributor's contention that the larger bankers to-day are sold on the importance and stability of the automotive industry; that it is taking "beans to Boston" to tell them that the modern passenger car ranks with the telephone, telegraph, railroad, typewriter and computing machines as a utilitarian necessity in our modern business and social complex, and that the propaganda sent out broadcast by the factories to this effect is largely a smoke screen to conceal from distributors and dealers the real cause of the disinclination of the banks to extend to them a substantial line of credit. He maintains that it is an insult to the modern banker to impute to him the anachronistic perspective implied by this widespread propaganda. After reading the following you will understand why the distributor requested that his name be withheld:

"The provisions of the contract under which an automobile dealer sells and establishes his business is of more importance to him than he has yet realized. The glamor of the business has been its chief attraction in days gone by. That glamor is now entirely removed, and the dealer who wishes to succeed has to establish and conduct his business on just as sound a basis as any other retailer of merchandise. If he does not he is simply a gambler.

"The position of the automobile dealer of the present moment is one calling for serious thought.

"The exigencies of to-day's selling call for up-to-date premises equipped with the best devices for prompt and reliable service and a salesroom inviting in appearance and

Something About

This Story and Others to Follow It

NOW that the automotive industry has entered definitely upon a period of intensive merchandising, when permanent, selling dealers will be a necessity to the manufacturer, the question of the dealer contract has assumed new importance.

On this and the opposite page a successful Canadian merchandiser of American cars discusses the present form of contract, under which he thinks the dealer is far from "decently protected."

In next week's issue there will be a critical analysis by an American distributor of a typical dealer contract, with some suggestions for reform in the interest of fairness to the dealer and permanency of the industry.

And the following week there will be a discussion by a manufacturer of a suggested five-year rider to his dealer contract, with the reaction of some distributors to the suggestion.

And in later issues of Motor World will be further studies of and opinions on the dealer contract.

tasteful in its appointments.

"The days of selling from a small store or side street garage have gone by. The public looks for permanent representation and asks what local interests are behind the car they are being invited to buy.

"A properly equipped sales and service station, complete in every detail, will entail an investment of from \$50,000 to \$250,000, and the man who will invest this amount of capital should be a business man from beginning to end with his interests decently protected.

"Is he?

"The present period of financial stringency hit the automobile dealers early.

"Automobile manufacturers launched a big campaign to urge and teach dealers how to sell the merits of the industry and the stability of the automobile business generally to their bankers with a view to securing sufficient credit to carry a stock of the manufac-

turers' cars during the slow selling season. Whether their efforts to do so have met with success or failure depends entirely upon the banker's turn of mind. If he asked the dealer what was the foundation upon which he was building his business and received the reply, 'My contract with the A. B. C. Motor Co. to sell their cars,' the banker naturally asked to see that contract to analyze its worth.

"Did the banker find the dealer had shown himself to be a good business man by securing a contract that was worth while, fair on both sides and an asset of good will on which to bank for at least a few years in order to secure enough profit to justify his investment?

"Let us see.

"He found the A. B. C. Motor Co. had agreed to sell the dealer their cars for resale in a certain defined territory at a discount from a list price fixed by the manufacturer; that the A. B. C. Motor Co. would not be responsible if some other dealer sold a car into the dealer's territory; that the dealer must establish at his own cost and expense sub-agencies to be designated by the manufacturer; that the sub-dealer's contract with the dealer was cancellable by the manufacturer; that the manufacturer would not accept responsibility for non-fulfilment of orders; that the dealer would pay the expense of diverting orders from himself to some other dealer; that the manufacturer reserved the right to change prices and the dealer was obligated to fill orders on hand at the new prices; that although the dealer was compelled to carry a stock of cars on hand varying according to the size of his business from one to one or more hundreds, the manufacturer reserving the right to change design of cars without incorporating such design into the dealer's stock of new cars on hand or protect him from loss because of the changes; that the manufacturer was not responsible for loss or damage after delivering goods to common carrier. He also found that the manufacturer undertook to replace defective parts within ninety days but did not bear labor costs of installing them; the dealer had to take it out of his commission. He also found that the manufacturer assumed no responsibility for a defect that cannot be discovered by ordinary factory inspection; that the manufacturer reserved the right to sell to the Government or to corporations in a dealer's territory without compensating the dealer; that the dealer should carry a stock of parts to be determined by the manufacturer; that the dealer was compelled to make a deposit of from \$500 to \$2,000 with his contract, which bears no interest; that all payments for cars were to be strictly cash; that the contract was not transferable by the dealer, but might be assigned by the manufacturer; that the contract might be cancelled at five to ten days' written notice.

"Is a banker justified in pointing out to a dealer that

a contract such as this is not stable enough to justify a large credit or a big investment?

"That there is nothing in the contract to prevent it being taken away from him at the manufacturer's whim or the caprice of a sales or district sales manager?

"That there is nothing in it to prevent the manufacturer setting up a retail branch in opposition, or putting in a number of other independent dealers as competitors?

"All these things have been done by motor car manufacturers without recompense to the dealer even where the dealer has given them the very best representation.

"IS NOT THE LACK OF SOLIDITY IN THE CONTRACT THE REASON FOR THE BANKER'S ATTITUDE OF CAREFULNESS WHEN APPROACHED BY A DEALER FOR CREDIT RATHER THAN A DOUBT AS TO THE MERITS OF THE AUTOMOBILE INDUSTRY AS SUCH?

"The manufacturer by reason of the rapidly expanding market and the consequent desirability of securing sales franchises, has held the whip hand which some of his executives have not scrupled at times to wield tyrannically. The dealers and distributors have been ordered to dance and pay the piper. Non-compliance and even question at times has found them out in the cold, cold world with no redress. It is manifestly inequitable. Would it not be more wholesome if the A. B. C. Motor Co. and the X. Y. Z. Motor Co. and all the other companies came to us as the sales representatives do in other lines of manufacture to the purchasing agents of merchandisers in other branches of commerce, and each sold us the number we would buy of their various cars? After a canvass of our field we would decide that we could sell, say 100 A. B. C. cars, 50 X. Y. Z. cars, 30 of another make, 20 of another make and possibly 10 of another make and one or two of the highest priced and most exclusive cars.

"You raise the question of service. Service could be provided for readily by official service stations appointed or carried on by the manufacturers either singly or jointly."

Some Hot Tips for Tractor Dealers

HERE are some of the high spots in an address made recently by W. F. Loomis, manager of the Oliver Chilled Plow Works, before the Wisconsin Implement Dealers' Assn.

"The farmer is to-day, more ready to buy farm tractors than the dealer is to sell him."

"An implement dealer who can't sell at least twenty-five tractors in a season is a piker, though he may not know it, unless he really doesn't want to sell that many."

"The job can be accomplished by systematic, from-the-ground-up methods."

"Unless the dealer sells at least twenty-five tractors he can't begin to afford to give the service that is absolutely essential to successful operation of farm tractors and the business of selling them."

Continuing, Loomis outlined a plan of tractor merchandising, the important features of which are as follows:

"Map your territory, large enough to show the names and addresses of farmers, roads, etc."

"Card-index every farmer, his farm story, acreage, kind of soil, topography, acres under plow, swamp land."

"Take as your territory only as much as you can handle with your present force and equipment."

"Remember some farmers shouldn't be sold tractors yet."

"Now, analyze the data from two standpoints: How many should I sell next year, and what tractor will fill the bill?"

"Visit your manufacturer. Take your mechanic along. See what is put in the machine and why. Don't forget horsepower. Allow for overloads. And aim high. Buy in carloads. Don't be a piker. Don't let your customers pay for the experiments of some manufacturer. Take a contract with ONE manufacturer. The law of success is opposed to dividing your effort."

"Sell your whole organization on the tractor you have selected after such careful analysis."

"Sell your banker as your FIRST customer. Show him your campaign—of course you will have a plan. Get the manufacturer to help you on that. Money is going to be easier next spring. Sell the banker, and it will be even more easy."

"Don't let any of your people or any

other dealer's people sell the farmer who takes a tractor, improper equipment in the way of implements. Undersell on power. See that the equipment will not overload."

"Sell your county agent of the state agricultural department. They can't boost your game, but they can help you immeasurably. They can and do talk modern methods, and less overhead. They are full of advice you need."

"Begin every line and sentence of your effort, and end every line with SERVICE."

The foregoing is a short, snappy explanation of how to sell tractors by a man well qualified to talk on the subject. Application of the plan means hard work, but it is going to take real salesmanship to sell power farming this year. He must know the utility of the tractor and its implements—not merely its mechanical specifications. The farmer expects the power farming salesman to know more than he does about the subject, and he looks to him for information on how to use the tractor. And after he buys, he expects the dealer to provide service that will insure the proper performance of the tractor.

DEALERS INSPIRED TO NEW SELLING EFFORT BY MILWAUKEE SHOW

Strong Support of Project by Newspapers and Business Men Helpful in Getting Public into the Show's Selling Atmosphere—Large Attendance Indicates New Interest in Automobiles

MILWAUKEE, WIS., Jan. 22.

MILWAUKEE'S contribution to the "It's Time to Sell" movement, the Thirteenth Annual Automobile Show, in the Auditorium, Jan. 17 to 23, was a notable one. With characteristic efficiency, the Milwaukee Automotive Dealers Association, famed nationally as the organization that does things and does them right, staged a show that acted as a bung-starter to release the flow of gold from the barrel in which the consumer has been accumulating his income during the last five or six months while he was boycotting on buying. By the same token, the show generated the heat which worked up such perspiration that the dealers and sub-dealers of Wisconsin first turned down their coat collars, then jerked off their coats altogether and rolled up their sleeves to pitch into the work of real merchandising for 1921.

THE Milwaukee show, unlike many other so-called "local shows," always has been designed to spread a wide and vigorous influence, it being the big event of the year in the automotive industries for the State of Wisconsin and the upper peninsula of Michigan. As a retail selling proposition, its appeal is mainly to the people of Milwaukee and Milwaukee County, although it attracts consumer visitors from even the most distant parts of the state-peninsular territory. It is, however, probably equally or more important as a dealer selling effort, or the link between the distributors and the consumers. This year its value in this respect was unquestionably greater than ever before, for it converted a somewhat

Association, under the auspices of which the Milwaukee show is held, is composed for the most part of concerns and individuals who are the distributors of their respective lines in Wisconsin and upper Michigan in a wholesale way, and who act as dealers for these lines in Milwaukee city, county or a somewhat more extensive territory. Consequently the Milwaukee show is a dual promotion effort, each angle being distinct, although closely interrelated.

As dealers, the exhibitors employ the annual show to stimulate retail or consumer buying, immediately or near-future, at a time when mid-winter has had the effect of slackening business to the lowest point of the year. In respect

the inclination to compare the last half with the first half of 1920. Nevertheless, there was no question that business needed "pep," and the 1921 show furnished it in copious quantities.

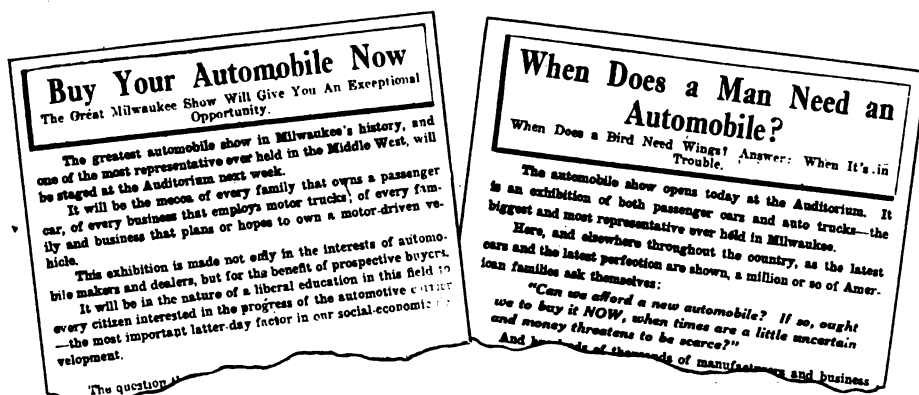
As distributors, the exhibitors employ the annual show to revive the interest of their dealer trade in the opportunities of the new and active motoring season, and far enough in advance to avoid an eleventh-hour jam of demand for cars by spreading orders and requisitions over the period from January to early April, when the real consumer demand begins to appear in this zone. Admittedly, the strong resistance offered dealers by the public in recent months had changed wrinkles of smiles of early summer to wrinkles of worry in the fall and early winter, and the need of a strong injection to brace up the dealer trade of Wisconsin was most apparent at the time the show came.

This year's Milwaukee show was held at approximately the same time as in every former year, the third week in January.

A question some exhibitors asked was: "Did Fate time this exposition for the psychological moment for the tilting of the lid on the buying pot, or did it cause the tilt?" Since the show season itself was a fixture, it may reasonably be assumed that it was the show itself that tilted the lid, especially when the splendid results of the show came to the surface in a most striking manner at its conclusion.

To one who has stood in every one of the thirteen Milwaukee shows so far held, in the character of an analyst, one of the conspicuous impressions received from it is that the Milwaukee dealers considered it as the most serious business they have ever had to handle. It was not that there was lacking any of the customary cheerfulness and optimistic atmosphere, but it was especially apparent that among the younger men

How the Newspapers Helped Boost Milwaukee's Show



Fine editorial support and lots of front page news stories in the Milwaukee papers were secured for the Milwaukee show—it helped get the public into a selling atmosphere. Here's how one paper co-operated editorially

apathetic dealer trade in this territory into a group of enthusiastic merchandisers. It awakened them to a keen realization of their responsibilities and opportunities as well.

The Milwaukee Automotive Dealers

to the need of such a stimulant at this time, it probably never was more necessary, for the dull mid-winter season had been preceded by five to six months of rather slack trade, made to appear slacker than it actually was because of



How Trucks Were Shown in Milwaukee

Milwaukee knows how to demonstrate trucks; its dealers have proved that, but this year's show had a "still" truck division because—well, there always has been one in the show

attending displays and booths there was a greater seriousness and closer attention to business than at previous shows.

All of which appears to indicate that the distributor and dealer trade of Milwaukee is keenly conscious of its responsibilities and the demands which it is having to meet in order to "Get Back to Selling." It fully realizes that the day of the chair-warmer type of salesman is past, and the day of the real salesman who is not afraid to work is here. This thought was enunciated clearly at the various sessions held by the Wisconsin Automotive Dealers Association during the show season. The message brought to these gatherings by a group of leaders of thought and action in the national industry concerned itself much with this point and helped greatly to build up a proper mental attitude needed for successful merchandising in the face of unusual obstacles.

It had been feared by some that National Thrift Week and Milwaukee Show Week coming coincidentally might have an adverse mental effect upon the public, but this did not prove true, because the Milwaukee association did not overlook this possibility. It co-operated with the Milwaukee Association of Commerce, and through it with the great body of merchants of the city, to teach the real meaning of thrift considerably in advance of the Thrift Week. Lest the more perverted meaning accepted by many people, namely, that to be thrifty means to be stingy and penurious, be present to affect the influence of the show, no suggestion of Thrift Week was made at the Auditorium as a direct part of the national campaign.

The newspapers of Milwaukee have always lent their utmost co-operation to the dealers association, both in and out of the show season. Naturally there is a selfish motive in this operation; still it was carried so much further this year than ever before that it not only was generally commented upon, but caused

much gratification among members of the trade.

It was regarded as a good sign of the earnestness with which the dealers approached the task of conducting a show that would start a new buying movement on cars that the special automobile show editions issued by every daily in Milwaukee should be at least as "fat" as in former years. The advertising

effective work to bring the public mind around to thinking in terms of "Buy Now." Many invigorating editorials were published before and during the show. These were voluntary contributions to the cause which were very greatly appreciated by the dealers. Such editorial co-operation has never been known in Milwaukee in the extent it reached during this year's show.

One thing which stood out prominently, too, was that the show was treated as "first page stuff" by all daily newspapers, every day. It was customary in former years to give the news of the opening night of the show a place on the front page, but this year the show drew the very first column, and every day afterward an article telling of the progress of the show and its effect was carried on the front page and treated as equal to the most important news of the day.

The exposition in itself covered more area than any former show. By means of ingenious rearrangements to make every inch count, it was possible to stretch the space and accommodate a larger number of exhibits of every character than at any previous show. The displays embraced 305 passenger cars; 58 motor trucks, and 62 distinct automotive equipment exhibits.

The decorative scheme was designed to represent a rose garden and the theme of Spring was carried out beautifully. As a spectacle, the 1921 show was one of the most pleasing in appearance and effect that Milwaukee has staged. One of the factors contributing to its beauty was the large number of enclosed cars and special jobs of design, trimming and painting among the exhibits. The main arena, Kilbourn, Juneau and Walker halls, and rest rooms on the main floor of the Auditorium housed passenger car exhibits, the overflow being accommodated in Machinery Hall in the basement, the major portion of which was devoted to the motor truck division. Corridors

The Milwaukee Show

MILWAUKEE has joined the procession behind the banner "It's time to sell."

The beautiful show in the Auditorium, Jan. 17-23, supplied just the atmosphere that was necessary to enthuse the dealers with new selling zeal and jolt the apathetic buying public into a new interest in motor cars.

One of the strong features of the Milwaukee show was the effective manner in which it was "sold"—even before the doors opened. The newspaper support given the project was distinctly helpful.

Read the story.

patronage was liberal, both on the part of individual dealers and the association as a whole. The association, for two weeks before the show opened, published a series of forceful display advertisements containing excellent sales promotion text, and signed by the Milwaukee association as well as the National Automobile Chamber of Commerce and the Motor and Accessory Manufacturers Association.

From a purely editorial standpoint, the Milwaukee newspapers did most

on the main floor and basement were used for booths to display automotive equipment of all kinds.

As usual, the truck division was made a very important part of the show. It was a "still" show, save for the fact that exhibitors got some action out of special equipment on trucks, such as dump bodies and hoisting devices. Interest was lent, too, by the exhibition in most instances of commercial cars finished, ready for delivery to customers, which had a much better effect than the mere displaying of trucks in the lead color or painted, but without the names of owners to make them something more than just another truck off the factory floor.

The Milwaukee Automotive Dealers Association learned long ago that the demonstration idea in conjunction with the tour plan of reaching the territory has more merit than any other scheme of presenting the motor truck. But it

was virtually in self-defense that another "still" truck show was staged, for here there is a certain demand that an automobile show shall have a motor truck division, born of the long association of passenger and commercial cars at Milwaukee shows since their inception in 1908. A year ago the association staged a demonstration tour during the show season which was a wonderful testimony to the ability of the motor truck as a freight carrier over Wisconsin highways under the most severe conditions imaginable. It was a daring undertaking, but because of conditions it was deemed inadvisable to repeat this sort of a demonstration during the 1921 show, especially since plans are in the making for a big demonstration somewhat later in the year. So, for the present, and the truck makers and dealers being willing to enter, the "still" truck show was continued as a part of the regular winter show.

While the idea of giving every paying visitor to the Milwaukee show an opportunity to participate in an auction of a passenger car at the close of the exposition is an old one, it was elaborated upon this year. It was customary for the M. A. D. A. to offer a Ford or a Dodge in this manner. This year a fully equipped Marmon sedan, listing at \$7,100, was disposed of among paying show visitors. The proceeds will be distributed among three hospitals of Milwaukee which are conducted by charitable organizations depending for support upon the voluntary subscriptions and donations of the citizens.

Both the purpose of the fund, and the extraordinary value of the offering, undoubtedly had much to do with the material increase in the paid admissions to the 1921 show. In a general way, the total attendance was somewhat larger than a year ago. Official figures, however, are not yet available.

When Is a Dollar NOT a Dollar?

By R. H. CROXTON

Sales Manager, Winerich Motor Sales Co., San Antonio

A DOLLAR is not a dollar when given in good faith by a patron of your establishment for value NOT received.

When the doors of a business house are thrown open to the public, an invitation is extended for public patronage, and the public in accepting the invitation does so in good faith of your intention to exchange dependable merchandise for its money, to deal fairly, and to render service, that will be satisfactory, promptly, efficiently, and at a fair price.

The sales of an automobile presupposes the sale of service. It may not be going too far to say that *no automobile is better than the service back of it*, and it is a wise dealer who knows his own service for upon the degree of its efficiency and satisfaction to the public he will rise or fall. The public ought not to pay for less than **VALUE RECEIVED**.

The responsibility of providing competent mechanics, rendering efficient service, and a thorough inspection of work before delivery rests absolutely upon the dealer, and is something of no concern to the public, and if the dealer has been efficient and thorough in his inspection of service work before delivery, there can be no acceptable excuse, better, there will be no reason or cause for a car to be returned for "work done over."

When you have made delivery of a car to its owner, accepting his money for his service work, given him a receipt for full payment made, that owner is justified in assuming that he has received full value. If the work has not been properly performed, and the owner satisfied, you (the dealer) will accept full responsibility along with the penalty of lost good will,

and perhaps lost patronage, for you have failed to give full value for what you received.

There can be no distinction made between the sale of automobiles and the sale of service. The one follows the other. In fact the one is the other. Perhaps custom has made it so, but it is a fact nevertheless. Any attempt to separate the two departments of sales and service or to interfere in any way with the co-ordination of their working and sales efficiency (co-operation) will prove costly. It has proved costly in every instance where tried.

There must be the same care, the same courtesy exercised in selling service as is exercised in selling automobiles if a dealer would build for future success and prestige in his community. The dealer who has established a reputation for giving **SERVICE THAT SATISFIES** will maintain a very decided advantage over the dealer who has failed to do so, and this regardless of the respective merits of cars handled.

A great many service stations have a long list of so-called cranks, owners who refuse to accept less than work properly performed. There are a great many so-called "service-hogs," owners who were assured at the time of purchase that they might expect satisfactory service from their car, and who have the backbone to insist upon that promise being made good.

The biggest job around any automobile establishment should be that of **SERVICE MANAGER**, and it should be filled by the **BIG BOSS** himself. He would at least get acquainted with the most important end of his business, would

come to know his patrons. He would know the kind of service he was receiving from his own employees, and would know just the kind of contact between his organization and the public through the most important business getting end of his establishment, namely the service station, which has most aptly been designated "the back-door of the sales department." He would further discover the hole through which much of his profit from the sale of automobiles was leaking, and he would come to know the truth about just the kind of a reputation he was establishing for himself in "his own home town."

Granting there may be unreasonable people to deal with, I yet maintain they can be satisfied, and their good-will is worth the price we pay for it. The meanest human on this earth has his or her friends whose good will and patronage is valuable, and our standard of service should be—**SATISFY THE MOST CRITICAL OWNER**. It can be done. What profit a dealer if he gain his point and lose the good will of a patron? A point is but a point won or lost while good will is cumulative. Your investment in good will continues to pay dividends long after a point in controversy has been forgotten.

From now on the most valuable automobile franchise will be the one which carries with it the greatest amount of good will, and by the same token, the most desirable automobile merchant in any community from the point of view of the manufacturer will be the dealer who enjoys in largest measure the public good will and confidence in his community.

Four Little Wise Ones

Said King Solomon:

Proverbs, XXX; 24-28

- 24—There be four things which are little upon the earth, but they are exceeding wise:
 25—The ants are people not strong, yet they prepare their meat in the summer;
 26—The conies are but a feeble folk, yet make they their houses in the rocks;
 27—The locusts have no king, yet go they forth all of them by bands;
 28—The spider taketh hold with her hands, and is in kings' palaces.



No. 1 — the ant.

By RAY W. SHERMAN

HERE were forty-two of them, all Sennett dealers in the Callawassa territory, and they always cheered when Reilly, chief of the gang, appeared before their meeting. The Callawassa show was on, and they were all there for two reasons, the first being that Reilly told them to be there and the second that they always came any way.

And during the show Reilly always held a sales convention of his dealers. If there was a new Sennett model or anything else that would help business it was always trotted out and put through its paces. Along with all this there was a liberal education in how to sell cars and make money—which some of them did.

Tommy Trumbull was ring master this year. Reilly had discovered that things ran about as well even if he wasn't there, so this year he was studying the show and everything that went with it, while Tommy ran the meeting.

This year Tommy's principal job was to make the dealers see that something besides enthusiasm and jazz music was necessary to get the orders flying over the transoms, and as he hot-footed it along through a speech that lasted fully an hour there flashed through his mind a series of sermons he had heard at his little neighborhood church.

"Why," he exulted, "more years ago than you know, old King Solomon laid down a mess of rules that must have been aimed right at you men here this afternoon. If the old king had been a distributor of cars he couldn't have hit things better. Seems to me he must have been thinking about our meeting this afternoon when he set down some things about FOUR LITTLE WISE ONES who don't seem to amount to much on this earth but who are mighty smart just the same.

"The first one on the list was the ant. Now, an ant isn't much of a factor when it comes to size or strength or intelligence or anything like that, but he surely can teach some of us smart folks a few things about how to be successful

in business or work or anything else. This little old ant has one great characteristic—just one—but, boys, it's a wonder—it's the habit of work.

"You've all watched ants hundreds of times. You've poked 'em with sticks when you were kids, and you've stepped on ant hills with your bare feet, and there isn't much use in my trying to tell you much about ants. But the thing I do want to get over is that you never saw an ant when he wasn't working, and most of the time he is headed in some definite direction to do some definite thing that COUNTS. That's how he stores up enough in the summer to last him all winter.

"Now, take our own motor car business. What's the ant or King Solomon got to do with it? Just this: That the habit of work is the one thing we need to-day more than any other one thing. The habit of work! Get it! The habit of work! That means more than you think it does. It means a perpetually boiling desire inside of you to be doing something. It means the utilization of the time between morning and evening in some way which will help you achieve the result you are aiming at.

"The time has come now when we are going to have some automobile business. The show has demonstrated that the people are still interested in cars and are willing to buy, BUT—the man who wins out from now on is the man who works in a way different from that in which he has worked before. It means work.

"Supposing you come down in the morning, go to your desk, read the paper and wait for the girl to open the mail. Supposing your salesmen come in, read the paper, thumb over their prospect files, finish the after-breakfast cigar and wonder what to do next. That is NOT the habit of work. Methods like that would cause any respectable colony of ants to ride the offending member out of town on a rail. When the ant comes out for breakfast he doesn't stand around half the forenoon wondering

what's he's going to do next. He probably starts for work with the last bite still in his mouth—and heads straight for the cold, wide world on a hunt for eats for the icebox.

"And that's what we've got to do in this business. Some of you men are your salesmen and some are your sales managers, and a few have their own sales managers, but I want to tell you, fellows, you've got to get some snap into things and make Time count or Time will count you out. If you are your manager or sales manager, you should get a system in operation that will make your sales organizations produce results. You should develop the habit of work. There should be some one to lay out each afternoon the work each person is going to do the next day.

"If each salesman has to lay out his own work, have him do it the last thing at night and let him start working as soon as the day begins. One thing a salesman can often do is grab a prospect after a good breakfast and give him a demonstration ride to the office. That makes a good starter. I've sold cars that way and anybody else can do the same thing. And then KEEP WORKING. The habit of work is mostly keeping at work. Spasmodic efforts don't count for the maximum.

"It seems to me that we, with our greater intelligence, ought to be able to see the one merit which an insignificant insect has and use for ourselves whatever of good there may be in him. And if you'll go back home and keep track of the time yourselves and your people put in you'll find that nearly all of us are working about 50 per cent efficiently. And working at twice that is easier than loafing on the job. It's all habit."

Tommy hesitated in a mental search for the next little wise one, but his hesitation was only momentary. "And then," he began—which is the end of the four hundred and eighth Reilly story printed in Motor World.

Economy of Power Farming to Be Keynote of Columbus Show

Special Appeal to Farmers, Bankers and Dealers Planned
—Educational Features Interesting

THE Sixth National Tractor Show will be held at the State Fair Grounds, Columbus, O., Feb. 7 to 12, inclusive. Eight large buildings will be required to house the exhibits, and practically all of the large tractor manufacturers, as well as the parts and implement makers, will be represented. In conjunction with the show, there

will be educational talks by power farming experts.

Advance information indicates that the show will be well attended. Farmers, dealers, bankers and business men from all sections of the country have signified their intention of being present. The preliminary advertising and publicity campaign has brought a steady stream of requests for complete information.

THE utility of the tractor and the economy of power farming are the two things that will be sold at the coming show. The exhibitors and management propose to make this an educational show. The dominating idea is to show how the tractor can make farming profitable under present conditions.

The show is intended to help the dealer sell by impressing visitors with the economic possibilities of power farming. It will do missionary work that would be either difficult or expensive for the dealer to do himself. It will help the dealer because he will obtain much valuable sales ammunition that he will find use for in soliciting his prospects.

The exhibitors will get away from the ordinary display idea. It is expected that each booth will present some educational ideas that will help to sell power farming. In this work the various engineering societies, and college agricultural departments which have space, will co-operate. Wherever practical exhibitors will also feature service. There will be men at the booths who will be competent to answer questions on operation, maintenance and repair.

There will be a series of late afternoon mass meetings in the Coliseum, which has a seating capacity of 7500. These will be addressed by men of national fame, who are qualified to talk to dealers and farmers. In addition, moving pictures of the tractor and related subjects will be shown in another hall.

An unusually interesting series of lectures has been arranged. The program follows:

- Feb. 8 Soil Conservation—F. I. Mann.
Adapting the Farm to Power—Raymond Olney, Editor of *Power Farming*.
Determining Type and Size of Tractor to Buy—I. W. Dickerson, Agricultural Engineer.
- Feb. 9 The Trend of Tractor Design—J. B. Davidson, Iowa State College.
Ignition Troubles—O. W. Sjogren, Nebraska College of Agriculture.
Tractor Hitches—Daniel Scoates, Texas Agricultural and Mechanical College.
Lessons from a Tractor Survey—

- G. W. McGuen, Ohio State University.
- Feb. 10 Lessons from Nebraska Tractor Tests—G. K. Shedd, Nebraska College of Agriculture.
The Tractor and Belt Power—William Aitkenhead, Agricultural College, Purdue University.
What Is Tractor Service?—J. B. Davidson, Iowa State College.
Community Purchase of Tractors—R. U. Blasingame, Pennsylvania State College.
- Feb. 11 Tractor Tools—H. H. Musselman, Michigan College of Agriculture.
Laying Out Fields for Plowing—F. W. Duffee, Wisconsin College of Agriculture.
Tractor in Winter—R. U. Blasingame, Pennsylvania State College.
Housing the Tractor—F. W. Ives, Ohio State University.
What the Tractor Has Done for Me—By Four Real Farmers.

No admission will be charged to the show. Each visitor will be required to register and he will be given a label button to indicate that he has registered. These buttons will be of different colors—farmers will get one color, dealers another, etc. This identification is expected to be of material assistance to the exhibitors in dealing with the visitors. The registration cards will all be retained, and any of the exhibitors may make copies of the registration list.

The local importance of this show is not to be overlooked. This is the first national show to be held east of the Mississippi River, and it offers a splendid opportunity to sell the power farming idea to contiguous territory more thoroughly than ever before.

An extensive advertising and publicity campaign is being carried on in the farm and business papers, and in the newspapers. Various dealer associations are also co-operating to put the show over.

The show will be well worth attending. It is intended particularly for the dealer and the farmer, but anyone living in an agricultural community will find it interesting and instructive. It is the opening of the spring campaign for business. Despite the unsatisfactory market for farm products, the farmer will go through the

usual cycle of preparation, planting, cultivating and harvesting this year, and he will require farm operating equipment. It's time for him to buy. The National Tractor Show at Columbus is the first gun in the offensive to induce him to buy. Be there yourself.

Get your customers and prospects to attend.

Tractors

- Advance-Rumely Thresher Co., La Porte, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Aultman & Taylor Machy. Co., Mansfield, Ohio.
Automotive Corporation, Toledo, Ohio.
Avery Company, Peoria, Ill.
Bates Machine & Tractor Co., Joliet, Ill.
C. L. Best Tractor Co., San Leandro, Calif.
Boring Tractor Corp., Rockford, Ill.
Bryan Harvester Co., Peru, Ind.
J. I. Case Plow Works Co., Indianapolis.
J. I. Case Threshing Mach. Co., Racine, Wis.
Cleveland Tractor Co., Cleveland, Ohio.
John Deere Plow Co., Columbus, Ohio.
Eagle Mfg. Co., Appleton, Wis.
Electric Wheel Co., Quincy, Ill.
Emerson-Brantingham Implement Co., Rockford, Ill.
Ford Motor Co., Columbus, Ohio.
Frick Company, Waynesboro, Pa.
Hart-Parr Co., Charles City, Iowa.
Holt Manufacturing Co., Peoria, Ill.
Huber Manufacturing Co., Marion, Ohio.
International Harvester Co., Columbus, Ohio.
J-T Tractor Co., Cleveland, Ohio.
La Crosse Tractor Co., La Crosse, Wis.
John Lauson Mfg. Co., New Holstein, Wis.
Moline Plow Co., Moline, Ill.
Monarch Tractor Co., Watertown, Wis.
Ohio Tractor Co., Columbus, Ohio.
Oldsmar Tractor Co., Oldsmar, Fla.
Parrett Tractor Co., Chicago Heights, Ill.
Port Huron Engine & Thresher Co., Port Huron, Mich.
Reliable Tractor & Engine Co., Portsmouth, Ohio.

Renault Selling Branch, Inc., New York.
Rock Island Plow Co., Rock Island, Ill.
The Russell & Co., Massillon, Ohio.
Samson Tractor Co., Janesville, Wis.
Shelby Tractor & Truck Co., Shelby, Ohio.

Tioga Manufacturing Co., Baltimore, Md.
Toro Manufacturing Co., Minneapolis.
Townsend Mfg. Co., Janesville, Wis.
Traylor Engine & Mfg. Co., Cornwell, Pa.

Twin City Co., Minneapolis, Minn.
U. S. Tractor & Machy. Co., Menasha, Wis.

Whitney Tractor Co., Upper Sandusky, Ohio.

Garden Tractors

Beeman Tractor Co., Minneapolis, Minn.
H. C. Dodge, Inc., New York, N. Y.
Midwest Engine Co., Indianapolis, Ind.
New Britain Machine Co., New Britain, Conn.
Smith-Waring Corporation, Harrisburg, Pa.

Farm Trucks

Advance-Rumely Thresher Co., La Porte, Ind.
Avery Company, Peoria, Ill.
International Harvester Co., Columbus, Ohio.
Moline Plow Co., Moline, Ill.
Steinmetz Electric Car Corp., Baltimore.
Traylor Engine & Mfg. Co., Cornwell, Pa.
Twin City Co., Minneapolis, Minn.

Tractor Engines

Buda Company, Harvey, Ill.
Climax Engineering Co., Clinton, Iowa.
Hercules Motor Mfg. Co., Canton, Ohio.
LeRoi Motor Co., Milwaukee, Wis.
Midwest Engine Co., Indianapolis, Ind.
Stearns Motor Mfg. Co., Ludington, Mich.
Waukesha Motor Co., Waukesha, Wis.
Wiedely Motors Co., Indianapolis, Ind.
Wellman-Seaver-Morgan Co., Akron.
Wisconsin Motor Mfg. Co., Milwaukee.

Implements and Belt Machinery

Advance-Rumely Thresher Co., La Porte, Ind.
American Seeding Machine Co., Springfield, Ohio.
Aultman & Taylor Machy. Co., Mansfield, Ohio.
Avery Company, Peoria, Ill.
B. F. Avery & Sons, Louisville, Ky.
Blizzard Sales Co., Grand Rapids, Mich.
Bucher & Gibbs Plow Co., Canton, Ohio.
J. I. Case Plow Works Co., Indianapolis.
J. I. Case Threshing Mach. Co., Racine, Wis.
Collins Plow Co., Quincy, Ill.
John Deere Plow Co., Columbus, Ohio.
The Dunham Company, Berea, Ohio.
Emerson-Brantingham Implement Co., Rockford, Ill.
Empire Plow Co., Cleveland, Ohio.
A. B. Farquhar Co., Ltd., York, Pa.
Frick Co., Waynesboro, Pa.
Huber Manufacturing Co., Marion, Ohio.
International Harvester Co., Columbus, Ohio.
La Crosse Plow Co., La Crosse, Wis.
McAdam & Sons, Barker, N. Y.
Meili-Blumberg, New Holstein, Wis.
Moline Plow Co., Moline, Ill.

Ohio Cultivator Co., Bellevue, Ohio.
Oliver Chilled Plow Works, South Bend, Ind.
Once Over Tiller Corp., Minneapolis.
Owensboro Ditcher & Grader Co., Owensboro, Ky.
Papec Machine Co., Shortsville, N. Y.

The Columbus Tractor Show

THE Sixth National Tractor Show in Columbus, Feb. 7-12, has a big, vital message for farmers, bankers, dealers and business men interested in the economic problems of the country.

It is the utility of the tractor and the economy of power farming. These are being made the keynote of the great exposition, the first to be held east of the Mississippi.

There are indications that the spring will bring a decided increase in the demand for power farming equipment, and the Columbus show is expected to exert a strong influence in this direction.

Rock Island Plow Co., Rock Island, Ill.
Roderick Lean Mfg. Co., Mansfield, Ohio.
The Russell & Co., Massillon, Ohio.
Samson Tractor Co., Columbus, Ohio.
Swayne-Robinson Co., Richmond, Ind.
Thomas Manufacturing Co., Springfield, Ohio.

Twin City Company, Minneapolis, Minn.
U. S. Wind Engine & Pump Co., Batavia, Ill.
Whitney Tractor Co., Upper Sandusky, Ohio.

Carburetor and Ignition Equipment

American Bosch Magneto Corp., Springfield, Mass.
Byrne Kingston Co., Kokomo, Ind.
Champion Ignition Co., Flint, Mich.
Eisemann Magneto Co., Brooklyn, N. Y.
Heinze Electric Co., Lowell, Mass.
K-W Ignition Co., Cleveland, Ohio.
John Lauson Mfg. Co., New Holstein, Wis.
A. R. Mosler Co., New York, N. Y.
O. K. Giant Battery Co., Gary, Ill.
R-W Company, Chicago, Ill.
Simms Magneto Co., East Orange, N. J.
Splitdorf Electrical Co., Newark, N. J.
Stitt Ignition Co., Columbus, Ohio.
Stromberg Motor Devices Co., Chicago.
The Teagle Co., Cleveland, Ohio.
Westinghouse Union Battery Co., Swissvale, Pa.
Wheeler Schebler Carburetor Co., Indianapolis, Ind.

Oils and Greases

Balso Oil Co., Toledo, Ohio.
Indian Refining Co., New York, N. Y.
The Ironsides Co., Columbus, Ohio.
National Refining Co., Cleveland, Ohio.
Pure Oil Co., Columbus, Ohio.
Sinclair Refining Co., Chicago, Ill.
Sun Company, Toledo, Ohio.
Tide Water Oil Co., New York, N. Y.
Vacuum Oil Co., New York, N. Y.

Miscellaneous Parts and Accessories

Allegheny Gear Works, Pittsburgh, Pa.
Alemite Lubricator Co., Columbus, Ohio.
Allen, S. L., & Co., Philadelphia, Pa.
American Hammered Piston Ring Co., Baltimore, Md.
American Pulley Co., Chicago, Ill.
Atlantic Machine & Mfg. Co., Cleveland, Ohio.
Atlas Brass Foundry Co., Columbus, Ohio.
Baines Eng. Co., Dover, Ohio.
Baldwin Chain & Mfg. Co., Worcester, Mass.
Bonney-Floyd Co., Columbus, Ohio.
Bourne Fuller Co., Cleveland, Ohio.
Bunting Brass & Bronze Co., Toledo, Ohio.
Clark Turner Piston Co., Los Angeles, Calif.
A. J. Detlaff Co., Detroit, Mich.
Diamond Chain & Mfg. Co., Indianapolis.
Fafnir Bearing Co., New Britain, Conn.
Framerman Industrial Development Corp., New York, N. Y.
Gill Piston Ring Co., Columbus, Ohio.
Goodyear Tire & Rubber Co., Akron, Ohio.
Grid Iron Grip Wheel Co., Toledo, Ohio.
Gurney Ball Bearing Co., Jamestown, N. Y.
Hyatt Roller Bearing Co., Chicago, Ill.
Jeffry Mfg. Co., Columbus, Ohio.
Ker-o-el Sales Co., Cleveland, Ohio.
Kohler Co., Kohler, Wis.
John Lauson Mfg. Co., New Holstein, Wis.
Lebanon Steel Foundry Co., Lebanon, Pa.
Link-Belt Co., Chicago, Ill.
Link Mfg. Co., Kansas City, Mo.
McQuay-Norris Mfg. Co., St. Louis, Mo.
S. W. Merritt Co., New York, N. Y.
Midvale Steel & Ordnance Co., Philadelphia, Pa.
Miller Traction Tread Co., Chicago, Ill.
New Departure Mfg. Co., Bristol, Conn.
Niles-Bement-Pond Co., New York.
No-Leak-O Piston Ring Co., Baltimore, Md.
Norma Co. of America, Long Island City, N. Y.
F. D. Nuttall Co., Pittsburgh, Pa.
Oakes Company, Indianapolis, Ind.
Ohio Steel Foundry Co., Springfield, Ohio.
Perfex Radiator Co., Racine, Wis.
Piersen Mfg. Co., Topeka, Kan.
Rowe Mfg. Co., Galesburg, Ill.
Sivyer Steel Casting Co., Milwaukee, Wis.
SKF Industries, Inc., New York, N. Y.
Society of Automotive Engineers, Inc., New York, N. Y.
Standard Steel & Bearings, Inc., Philadelphia, Pa.
Sunbeam Electric Mfg. Co., Evansville, Ind.
O. E. Szekeley Co., Moline, Ill.
Timken Roller Bearing Co., Columbus, Ohio.
Torbenson Axle Co., Cleveland, Ohio.
Twin Disc Clutch Co., Racine, Wis.
United Mfg. & Distributing Co., Chicago.
U. S. Rubber Co., Cleveland, Ohio.
Vortex Mfg. Co., Pomona, Cal.
Whitehead & Kales Co., Detroit, Mich.

Editorial Observation

The Automobile and the Newspaper

DOWN in Georgia, where a Federal Reserve Bank official for a time last summer went out of his way to brand the automobile as non-essential, the industry is receiving some wonderfully helpful newspaper support, far in advance of the forthcoming Atlanta show. If this sort of support continues—and there is no reason to believe it will not—the show will have paid its way as a business promoter before its doors are opened. In a leading editorial the other day the *Atlanta Georgian* said:

When a man owns a car, big or little, expensive or otherwise, he owns the earth's surface, he has conquered the power of gravitation which originally glued us to one little spot. HE AND HIS FAMILY ARE REALLY FREE.

A family without an automobile is not a FREE family, and it can not be as completely a UNITED family, as though the automobile, the American family machine, were there.

Certain things are luxuries. The automobile for

those that can have it is a plain, matter of fact, common sense NECESSITY.

If you haven't got one, if you do not get one in the meantime, do not miss the forthcoming automobile show in Atlanta. If you have one and can afford a better, go to the show, look around and get a BETTER one. You owe that to your family, to yourself and the industry, IF you can afford it.

And then the *Georgian* advised its readers who need and can afford an automobile to *buy it now*.

This sort of comment, which has its duplicate all over the country before and during the shows, is one of the reasons for holding the shows. Newspapers won't give space to what a man thinks, but they will print what he says or does. It takes action to "break into print." The shows *are* action of the picturesque, attention-commanding sort and they will do a great deal to convince the public that it is to the general public interest that buying, which is the foundation of employment and prosperity, be resumed.

The Uniform Motor Vehicle Bill

NEWs that several legislatures are considering enactment of the uniform motor vehicle bill indorsed by the Motor Vehicle Conference Committee may prompt inquiries in some quarters as to what this committee is and who is behind it. Largely, it may be said that the committee represents the automotive industry and that part of the public which uses automotive vehicles. On the committee are representatives of the American Automobile Association, the National Automobile Dealers Association, the National Automobile Chamber of Commerce, the Motor and Accessory Manufacturers' Association, the Rubber Association of America and the Trailer Manufacturers' Association of America.

The proposed law, whose adoption by all States would simplify the entire motor vehicle question of the country and do away with many prevailing injustices, suggests legislation on virtually all phases of the subject. Based on the best practice of the most progressive States on the question of automobile operation, the law covers registration, licensing of operators, recognition of non-resident registrations by reciprocal agreement with other States, rules for vehicle equipment and operation, use of highways for

pedestrian traffic, court proceedings, penalties, etc. A complete summary would be too long for the space available here, but a copy of the proposed law may be obtained for the asking on application to the committee at 366 Madison Avenue, New York.

Particularly on the subjects of license fees, which are in lieu of all taxes, and of operating rules, which would simplify the driver's problems if all States had uniform legislation, is the uniform bill important to the industry. It should be read by the men in the industry, who will find the committee ready to co-operate with them in getting before legislative bodies the suggested reforms contained in its text.

American automobile manufacturers and dealers used to view with admiration approaching envy the polished chassis exhibited here by European car makers in the early days of the industry. Then it was generally agreed that "we can never do that." Now, at any large show in this country, beautifully finished chassis are to be seen and they are not confined to high priced cars. At the New York Show there were several fine chassis displays in the medium and low priced classes—and they attracted wide attention.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Taxi Ordinance Held Unreasonable

That a provision in a city ordinance that a taxi driver must remain within 10 feet of his vehicle was unreasonable, was the recent decision of the Supreme Court of Louisiana, in the case of City of New Orleans vs. Gilly, 86. So. Rep. pg. 564.

The ordinance passed on read:

"Persons in charge; There shall not be more than one person in charge of each taxicab or for hire vehicle and he shall at no time be more than ten feet away from his vehicle."

The defendant who operated a taxicab happened to move more than ten feet away from where it stood. He was arrested and sentenced to pay a fine of ten dollars. The Supreme Court reversed the decision of the Recorder's Court on the ground that the ordinance was unreasonable.

Use of "Overland" Barred

That the use of the word "Overland" was fraudulent and constituted unfair competition, when adopted as part of the corporate name of a concern engaged in the business of rebuilding automobile tires, when the concern purposed listing its stock on exchanges where the stock of complainant and its subsidiaries was also dealt in, was the decision of the District Court, of the District of Delaware, in the recent case of Willys-Overland Co. vs. Akron-Overland Tire Co. Inc. 268 Fed. pg. 151.

The court decided that as the complainant had used the word "Overland" as part of its corporate name for 13 years and had registered it as a trademark for automobiles and had extensively advertised it it had become associated by the public with complainant and its products.

Drastic Ordinance Held Valid

The Court of Appeals of Kentucky, in the case of Commonwealth vs. Nolan, 224 S. W. pg. 506, decided that an ordinance of the city of Harlan, confining the operation of all motor vehicle travel on one of its streets for a specified distance, was valid, because of the narrowness of such street.

Judge Settle, in his opinion, said, "The authorities we have cited and commented on seem to us to be conclusive of the questions under consideration, and, while we do not hold that motor vehicles may

be wholly excluded from the use of any street used by other vehicles, we are not inclined to disagree with the conclusions they otherwise express. Manifestly there can be nothing unreasonable or oppressive in an ordinance which confines the use of a single dangerous street by such vehicles to travel one way."

Illinois Garage Lien Law Unconstitutional

Editor Motor World: On December 21, 1920, the Illinois Garage Lien Law was declared unconstitutional by the Supreme Court on the ground that it was special legislation, in violation of certain sections of the United States Constitution and the Illinois Constitution. Further the court held that it gave the garagemen power to dispose of another's property without due process of law.

We are advising you of this because we believe that this decision will affect the Lien Laws in other states, more or less.—Chicago Garage Owners' Association, G. H. Steineck, Acting Secretary.

(Editor's Note—This case will be reported in full in a future issue.)

Dealer Must File Sale Contract

That in Michigan, a distributor must, in order to protect himself when he sells automobiles to a dealer for resale on a conditional bill of sale, file the conditional sale contract in the office of the register of deeds for the county in which the dealer's place of business is situated, was the decision of the Supreme Court of Michigan in the case of Becker vs. La Core, 179 N. W. pg. 344.

The court held that as the persons purchasing from the dealer purchased in good faith they produced a good title against the distributor in the absence of his showing that he had complied with the statute as to filing the conditional bills of sale, as the distributor knew the dealer was taking the cars for the purposes of reselling them.

Bill of Sale Virtually A Mortgage

In the recently decided case of Worcester Morris Plan Co. vs. Mader, the Supreme Judicial Court of Massachusetts, decided that a bill of sale given as security for a debt constituted, virtually, a mortgage, it was invalid as against another bill of sale from the conditional seller, when it was not recorded

as provided in Rev. Laws c. 198, Par. 1. as amended by St. 1915, c. 226. 128 N. E. pg. 777.

Cars May Be Seized Under Volstead Act

Editor Motor World: The writer would like to know or get information in respect to cars which were sold only on a lease plan and were caught hauling liquor without a permit. Could such a car be confiscated or sold if this car were not fully paid for?—H. E. W., Tamaqua, Pa.

Answer—It has already been pointed out in these columns several times that this is a federal matter, and cars can be seized under the so-called Volstead Law or under the provisions of Sec. 3450 of Rev. Stat. U. S.

Under the latter the dealer is helpless unless the car was stolen from him but under the former he can establish his claim to the amount due him if he can satisfy the court he did not know the car was being used for the illegal purpose—or should have known by the exercise of due care.

Where Car Is Repaired Is Not Essential

Editor Motor World: "A" runs into and damages the car of "B." "A" acknowledges the fault and refers the matter to his insurance company. The insurance company instructs "B" to take his car to a reliable shop for repairs saying that they will pay the bill. "B" however prefers another reliable shop and refuses to take car elsewhere.

Can insurance company legally avoid payment of bill, if work is not taken to shop indicated by them? Can "B" force collection of bill after having taken car to shop of his choice.

If "B" is dealing direct with "A" in this matter would it change the legal aspect in any way? K. M. Lobred, Louisville, Ky.

Answer—Your claim is against "A" and theoretically you do not care if he has insurance or not. You may have the car repaired wherever you choose and the only complaint that "A" or the insurance company can make is that the price charged you is not the fair and reasonable value of the work done. They may also compel you to sue instead of settling the matter but you are not legally prejudiced.

A Department of BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 176

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Taps and Dies—Screw Thread Practice

Explanation of the Different Varieties of Threads—Tap and Die Forms and Styles—Tables of Sizes—List of Assortments

PRACTICALLY all screw threads of the smaller diameters used in automobile practice are made by taps or dies of one kind or another. A tap is the name applied to any tool which has a fixed or adjustable form and which cuts threads on the inside of a hole. A die is the name applied to a solid or adjustable tool which cuts the threads on the outside of a rod or cylinder of any kind.

There are a number of different kinds, forms and sizes of threads used on the automobile, and until the number was reduced by the standardization of the S. A. E. the number was still greater. In the business of repairing automobiles, taps and dies are almost indispensable. There are many times when bolts or studs

have damaged threads and the spare parts are not available. A die will clean up the threads and, providing the damage to the threads is not too great, the part will be as strong as ever. Stock nuts and parts often get the threads burred from rough handling, and a tap will clean them out. It also often happens that nuts and other parts will have threads cut which are off size, and taps and dies are the only tools which will make them fit together.

There are two general forms of thread in general use, beside a few special threads which will be mentioned later. The forms are the V-thread and the U. S. Std. The V-thread, shown in section in Fig. 1, has teeth whose sides are at an angle of 60 deg. to each other so that a section of the tooth is a perfect

triangle with sides of equal length. This form of tooth is used in machine screw practice and to a limited extent in bolt and nut work. The weak point of this form of thread is the extreme edge of the thread which can never be made absolutely perfect, and even if it were possible to make it perfect, the extreme edge would have very little strength. By flattening the top and bottom of the thread for a distance of one-eighth of the pitch, the thread can be made more nearly perfect and the die does not bite so deep into the bolt or rod, thus giving additional strength by increasing the root diameter of the thread and at the same time strengthening the tooth. U. S. Std. form is almost universally used in bolt and nut practice and is also the form for the S. A. E. threads.

Aside from these two forms, there are some special threads which have other forms. The standard pipe thread which is used in the United States has a pointed tooth, and the stove bolt thread has a rounded thread. Acme 29 deg. threads, square threads and Whitworth (English) threads are not used in automobile practice.

In addition to the variations in form there are three general standards of teeth to the inch, these being U. S. Std., S. A. E. and Machine Screw, all these standards being used on the automobile. The accompanying tables give the number of teeth per inch for the different standards. In addition, the tables show the proper drill or boring size to bore a hole which is to be tapped out with that particular size tap. The drill is always a little larger than the root diameter of the thread so as to allow the tap to go through without binding and without the application of too much power. If the hole is made too small, the tap will push hard and there is liability of breakage. If 75 per cent of the thread is available, the threads will be stronger than the bolt itself so that no harm is done by having the hole a trifle

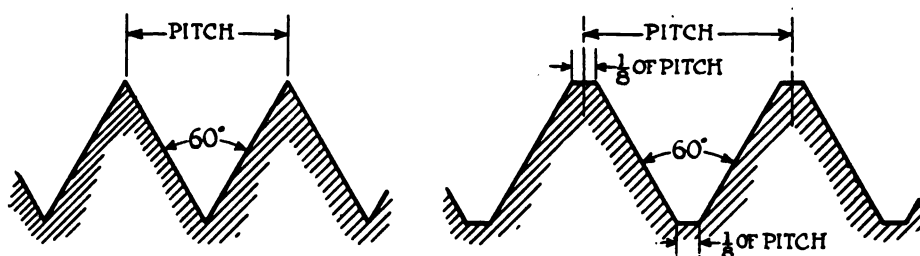


Fig. 1—Thread forms. The V-type has threads with sharp edges, the triangle being carried out full at top and bottom. The U. S. Std. has the same angle and pitch but the tops and bottoms of the threads are made flat, the length of the flats being one-eighth of the pitch

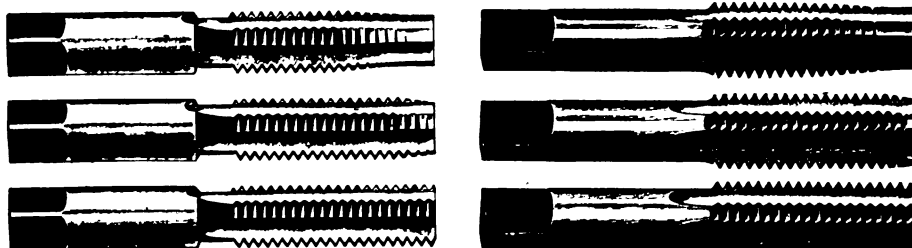


Fig. 2—Tap forms. Taper, plug and bottoming in both small and large shank

large. The tables allow for this clearance and give the size drill that will allow about 75 per cent thread.

Construction and Care of Taps

Taps are made in standard proportion and are marked with the size, the number of threads per inch and the form of the thread. For accurate work, each size and thread should have three taps, a taper, plug or follower, and bottoming. These three forms are shown in Fig. 2. The taper tap has the outsides of the threads ground off, starting with the root diameter at the bottom and gradually increasing until there are a half dozen threads at the top of the tap that are full. The plug tap has a very short taper at the bottom and the rest of the threads are full. The bottoming tap has full threads from top to bottom. Where a hole is to be tapped, it should be started with the taper tap, followed with the plug tap and finished with the bottoming tap. The bottoming tap is only necessary, however, when full threads are desired clear to the bottom of a hole. It is then only possible to run the tap clear to the bottom of the hole by removing the tap several times and cleaning out the chips which would tend to keep the tap from bottoming.

As a rule, the bottoming tap is used more in manufacturing practice. A set

consisting only of plug taps will answer for general all around repair work, and if another form is desired, the best to buy would be a set of taper taps to accompany the plug taps.

The ordinary tap has a shank which is a trifle less than the root diameter of the thread, as this will allow the tap to be run clear through the work if desired, without the shank interfering. Where the taps have heavy service to perform, however, it is sometimes advisable to get taps which have the shank the outside diameter of the thread. Both of these forms and the three types mentioned in the previous paragraphs are shown in Fig. 2.

All U. S. Std. and S. A. E. taps have a center at both top and bottom so that the tap can be used in lathe work, or a drill press can be used in tapping out the holes by substituting a lathe center for a drill and keeping this center in the center of the tap. In the machine screw and stove bolt sizes, the bottom of the tap is rounded or pointed, but the center is in the top. This is an easy way to distinguish the different kinds if they happen to be kept in a single compartment.

Monkey wrenches, pipe wrenches and other adjustable type wrenches should not be used on taps to turn them. Each shop should have two or three tap wrenches of varying size to take the different size taps. It is admissible to use solid wrenches and it is especially convenient to do so when using the center on a drill press.

The teeth on any tap are "relieved" or cut down slightly at the heel to reduce the force necessary to push them through the work. Two of the forms of relief are shown in Fig. 3. In grinding a tap, therefore, the grinding should be done on the front edge of the tooth, but after the full section of the tooth is passed, the diameter would get smaller, so that there is a limit to the amount of grinding that can be done to the tap without throwing it out of standard size. Where the ends of small taps break off in use, the end can be ground off square and a new taper ground on the end teeth. Where the stub of the tap is pretty short, too short to taper the tap, it is good practice to simply grind the tap off square and save it for a bottoming tap. In grinding the new taper, be sure to get the front of the tooth highest and relieve it a little at the heel so that the cutting edge will have clearance.

Removing broken taps is a tiresome job and one that wastes a lot of time.

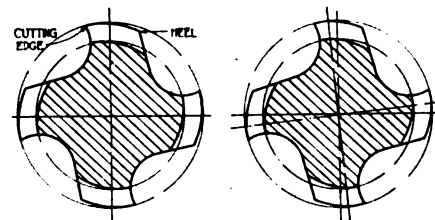


Fig. 3—Sections of two taps, showing two different methods of relieving the heel of the tooth

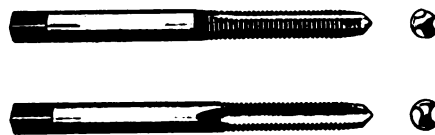


Fig. 4—Outlines and sections of two and three flute taps

There is really no shortcut for getting out broken taps quickly, and the best practice to observe is to use care in not pushing too hard on the tap wrench and in judging the amount of pressure for the diameter of the tap. Most of the small taps have a little spring and when the tap is pushed hard enough so that this spring can be felt, the tap should be backed off a little and then started again. If the tap is large enough, a pair of round-nose pliers can be used in extracting a broken tap. The round noses of the pliers are stuck down in the spaces between the teeth, and the pliers turned around. A slight tapping of the broken tap with a nail set and hammer will loosen the tap sufficiently to enable it to be withdrawn. In some cases where the piece of tap cannot be extracted, it is necessary to heat the whole piece to a red heat, softening the tap, which is then cooled slowly and then drilled out tap drill size. The pieces remaining can be dug out and the hole tapped over again.

It is of great importance to start the tap straight in the work, and after starting one or two threads the tap should be sighted in two directions or checked up with a square. If started straight, the tap will run straight barring hard spots in the metal, which may cause the tap to run off. The smaller taps, as a rule, will require no lubricant unless the material is very hard steel, but taps over 5/16 in. should be lubricated except when used in cast iron or brass, in which case lubricant would be no use and would only tend to clog up the teeth with chips. The best lubricant to use is lard oil or cottonseed oil. Ordinary lubricating oil is useless as a cutting lubricant and really hinders the cutting and does not give clean threads. Taps and dies which are well oiled will last two or three times as long as those which are not, and the teeth will retain a perfect shape for a longer period.

Types and Uses of Dies

Threads on the outside of bolts, cap screws, machine screws and other rods and tubes are cut with dies. There are three general classes of dies. The kind mostly used is the solid die split on one



Fig. 5—The markings on the tap show the size, threads per inch and thread form

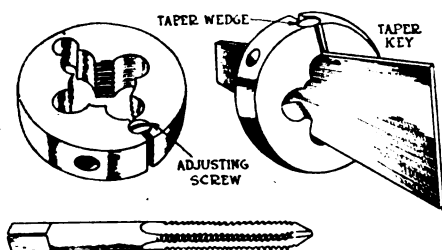


Fig. 6—Screw and wedge adjusted dies

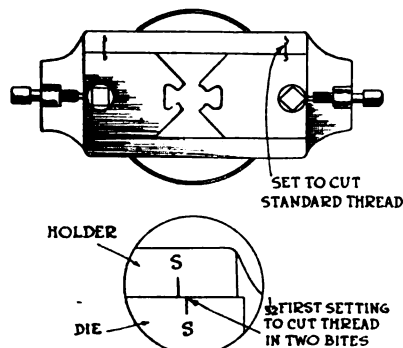


Fig. 7—Standard marks on pipe dies

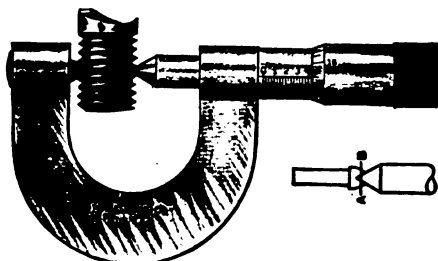


Fig. 8—Thread micrometer for accurately determining the diameter of a screw

Automobile Screw Threads

U. S. Standard Threads

Diameter	Thread per Inch	Tap Drill Size
1/4	20	13/64
5/16	18	1/4
3/8	16	5/16
7/16	14	23/64
1/2	13	27/64
9/16	12	15/32
5/8	11	17/32
11/16	11	19/32
3/4	10	41/64
13/16	10	45/64
7/8	9	3/4
15/16	9	13/16
1	8	55/64
1 1/16	8	59/64
1 1/8	7	61/64
1 1/4	7	1 3/32
1 3/8	6	1 3/16
1 1/2	6	1 5/16
1 5/8	5 1/2	1 27/64
1 3/4	5	1 33/64
1 7/8	5	1 41/64
2	4 1/2	1 3/4
2 1/4	4 1/2	.....
2 1/2	4	.....
2 3/4	4	.....
3	3 1/2	.....
3 1/4	3 1/2	.....
3 1/2	3 1/4	.....
3 3/4	3	.....
4	3	.....
4 1/4	2 1/8	.....
4 1/2	2 3/4	.....

S. A. E. Threads

The tooth form is U. S. Standard

Diameter	Threads per Inch	Tap Drill Size
1/4	28	7/32
5/16	24	17/64
3/8	24	21/64
7/16	20	3/8
1/2	20	7/16
9/16	18	1/2
5/8	18	9/16
11/16	16	39/64
3/4	16	43/64
7/8	14	25/32
1	14	29/32
1 1/8	12	1 1/64
1 1/4	12	1 9/64
1 3/8	12	1 17/64
1 1/2	12	1 25/64

Above 1 1/2 in. the S. A. E. threads have two pitches, coarse and fine.

Diameter	Coarse	Fine
1 5/8	12	16
1 3/4	12	16
1 7/8	12	16
2	12	16
2 1/8	12	16
2 1/4	12	16
2 3/8	12	16
2 1/2	12	16
2 5/8	12	16
2 3/4	12	16
2 7/8	12	16
3	10	16

Taps and Drills for Machine Screws

Size of Tap	Threads per Inch.	Body Drill Size	Size of Drill for Hole
5	30	30	41
5	32	30	40
5	36	30	38
6	30	28	39
6	32	28	37
6	36	28	35
7	28	24	32
7	30	24	31
7	32	24	30
8	24	19	31
8	30	19	30
8	32	19	29
9	24	16	29
9	28	16	27
9	30	16	26
10	24	11	26
10	30	11	23
10	32	11	21
11	24	6	20
11	28	6	19
11	30	6	18
12	20	7/32	21
12	22	7/32	19
12	24	7/32	19
13	20	15/64	17
13	24	15/64	15
14	20	1/4	14
14	22	1/4	13
14	24	1/4	11

Metric Threads

Diameter	Pitch	Root Diameter (Milli-meters)
3	.5	2.35
4	.75	3.03
5	.75	4.03
6	1.0	4.70
7	1.0	5.70
8	1.0	6.70
8	1.25	6.38
9	1.0	7.70
9	1.25	7.38
10	1.5	8.05
11	1.5	9.05
12	1.5	10.05
12	1.75	9.73
14	2.0	11.40
16	2.0	13.40
18	2.5	14.75
20	2.5	16.75
22	2.5	18.75

Pipe Threads and Specifications

Size	Threads per inch	Tap Drill size	Outside Diameter	Inside Diameter
1/8	27	21/64	13/32	9/32
1/4	18	27/64	35/64	3/8
3/8	18	9/16	11/16	1/2
1/2	14	11/16	27/32	5/8
3/4	14	29/32	1 1/16	53/64
1	11 1/2	1 1/8	1 21/64	1 3/64
1 1/4	11 1/2	1 15/32	1 43/64	1 25/64
1 1/2	11 1/2	1 23/32	1 29/32	1 5/8

This is the first of a series of articles dealing with the form, types, uses and care of standard shop tools and equipment. Other articles in the series will be published in the last issue of each month. Arbor presses will be covered in the issue of February 23, and this will be followed by drill presses, cylinder regrinding and reborring tools, drills and reamers, wrenches, etc.

Stove Bolt Threads

The tooth form is rounded at top and bottom.

Diameter	Threads per inch
3/16	24
1/4	18
5/16	18
3/8	16

side for adjustment. This may be either square or round to fit a die stock, and the adjustment may be either by means of a screw or by means of a pin moved in and out with a tapered wedge. The other types are solid non-adjustable and two-piece dies. Where the die is in two separate pieces, as in the case of pipe dies, there must be standard marks on both stock and dies so that the two pieces of the die can be set to cut a standard thread.

With the exception of the two-piece dies it is not possible to sharpen dies by grinding, and it is questionable whether the practice is advisable even in the case of the two-piece dies, as the expense of the dies is not very great.

Measuring Threads

For determining the diameter and pitch of threads accurately, a thread micrometer, as shown in Fig. 8, is used. For ordinary rough work, the existing thread can be tried with a tap or die. Fig. 9 shows the use of a rule or scale for determining the number of teeth per inch and also a thread gage which will give more accurate results.

What Sizes of Threads to Get Taps and Dies for

The selection of an assortment of taps and dies for the shop is a difficult one, and no rule can be absolutely laid down regarding the sizes that will be necessary. In general, there should be a tap and die of each size selected, and of the smaller taps, which are liable to break easily, it is good practice to have two or three on hand. The following lists have been made up, starting from the smallest number to a complete assortment. Regardless of what kind or make of tools selected, it is well to have the taps and dies from the same maker, so that they will be absolutely interchangeable.

Thirteen Thread Assortments

No. 1—Five Sizes, all S. A. E.
 $\frac{1}{8}$ -28, 5/16-24, $\frac{3}{8}$ -24, 7/16-20, $\frac{1}{2}$ -20.

No. 2—Five Sizes, all U. S. Std.
 $\frac{1}{8}$ -20, 5/16-18, $\frac{3}{8}$ -16, 7/16-14, $\frac{1}{2}$ -13.

No. 3—Six Sizes, all S. A. E.
 9/16-18, $\frac{5}{8}$ -18, 11/16-16, $\frac{3}{4}$ -16, $\frac{7}{8}$ -14, 1-14.

No. 4—Eleven Sizes, all S. A. E.
 Combining lists No. 1 and No. 3.

No. 5—Sixteen Sizes, S. A. E. and U. S. Std.

Combining lists No. 1, No. 2 and No. 3.

No. 6—Ten Sizes, S. A. E. and U. S. Std.
 $\frac{1}{8}$, 5/16, $\frac{3}{8}$, 7/16, $\frac{1}{2}$, both S. A. E. and U. S. Std.

No. 7—Sixteen Sizes

List No. 6 and 9/16, $\frac{5}{8}$ and $\frac{3}{4}$, both S. A. E. and U. S. Std.

No. 8—Twenty Sizes

List No. 7 and $\frac{7}{8}$ and 1, both S. A. E. and U. S. Std.

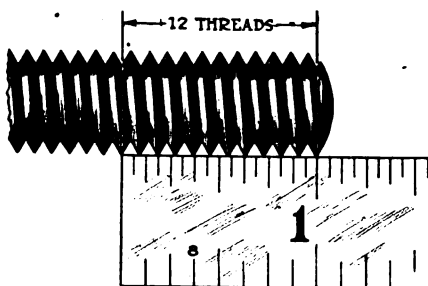


Fig. 9—Using a scale to determine the number of threads per inch

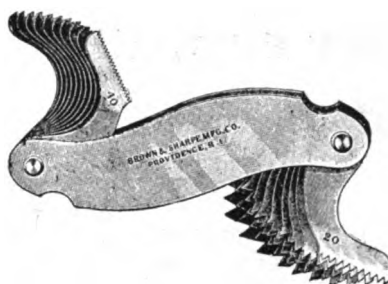


Fig. 10—Screw pitch gage for determining the number of teeth per inch

No. 9—Five Sizes, Machine Screw
 4-36, 6-32, 8-32, 10-24, 12-24.

No. 10—Seven Sizes, Machine Screw
 List No. 9 and 14-20, 16-18.

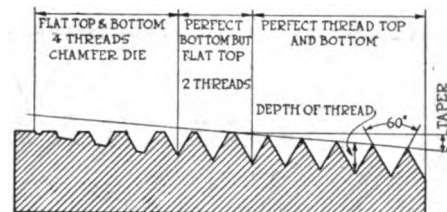


Fig. 11—Thread form for pipe threads

No. 11—Complete Set, Thirty-four Sizes

Nine sizes, U. S. Std., $\frac{1}{4}$ to 1 in.

Fifteen sizes S. A. E. $\frac{1}{4}$ to $1\frac{1}{2}$ in.

Five sizes, Machine Screw, as per list No. 9.

Five pipe sizes, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$.

No. 12—Sixteen Sizes, Set for Fords

Machine Screw, 6-32, 10-24, 10-32, 12-24, 14-24.

U. S. Std. and S. A. E., 7/32-32, $\frac{1}{4}$ -24, 5/16-18, 5/16-24, $\frac{3}{8}$ -16, $\frac{3}{8}$ -24, 13/32-16, 7/16-14, 7/16-20, $\frac{1}{2}$ -20, $\frac{1}{4}$ -28. Pipe, $\frac{1}{8}$.

No. 13—Eight Sizes for Motorcycle and Bicycle Repairs

3/16-22, $\frac{1}{4}$ -25, $\frac{1}{4}$ -30, 5/16-26, $\frac{3}{8}$ -20, $\frac{3}{8}$ -26, 9/16-20 right hand, and 9/16 left hand.

New Brockway Highway Express

Specifications

Price—\$1,750.

Capacity— $\frac{1}{4}$ -ton

Engine—4-cylinder, 3 $\frac{1}{2}$ x 5 $\frac{1}{2}$ in.

Ignition—Battery

Starting—Lighting—Two unit

Clutch—Multiple dry disk

Gearset—3 speeds

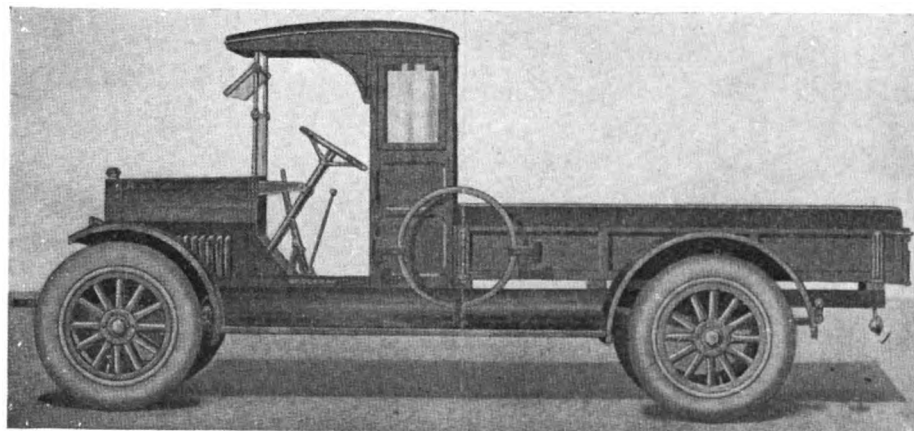
Final Drive—Spiral bevel

Tires—35 x 5 in., cord, demountable rims

Wheelbase—135 in.

Manufacturer—Brockway Motor Truck Co., Cortland, N. Y.

A $\frac{1}{4}$ -TON model, to be known as the Highway Express, is the latest addition to the Brockway line of motor trucks which includes 1 $\frac{1}{2}$, 2 $\frac{1}{2}$, 3 $\frac{1}{2}$ and 5-ton sizes. The new truck will sell for \$1,750. It is especially designed for such service as requires the transportation of light loads at comparatively high speeds. The length of the frame to the rear of the seat, is 98 in. Standard equipment includes electric starting and lighting, headlights with dimmers, taillight, cab top, express body, windshield, horn speedometer, extra rim, bumper, tools, jack and tire pump. The wheels are painted red, and the cab and body are finished in dark green.



Brockway Highway Express with open body

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. ELANCHARD

Make Your Street Frontage Count

IN a building of this width, it is very important to make every inch of street frontage count. It is of greatest value to the sales department, and consequently, in planning the front of the building, satisfactory provision should first be made for the sales unit, after which the other factors can be worked in to fit. The most common error in this connection is the center driveway. This construction permits of a maximum of convenience in the garage, and also offers slightly greater storage capacity than the side driveway. But it is seldom that these advantages will overbalance claims of the sales department for this space.

In this particular case, if a center

***M**OTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:*

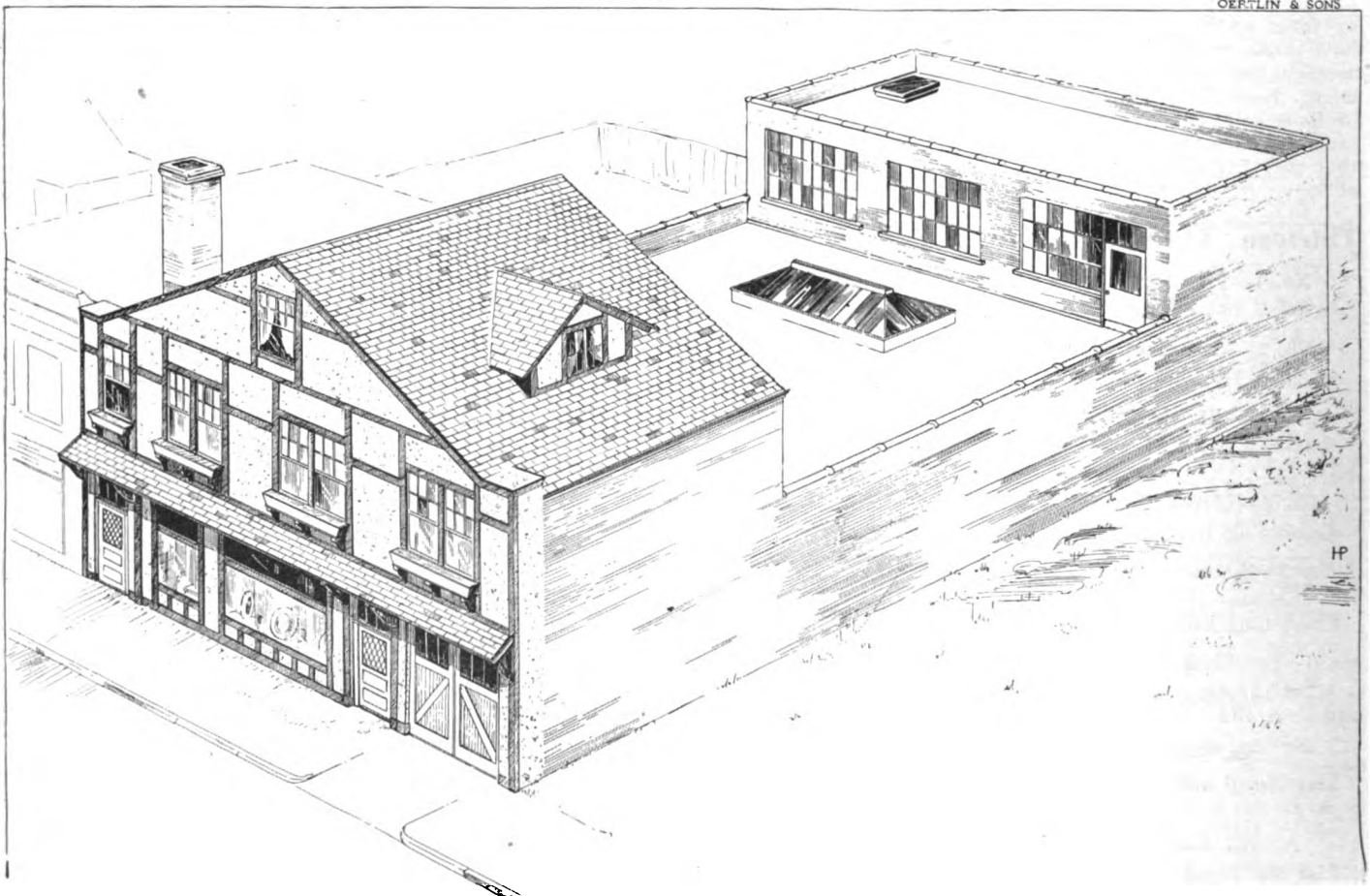
Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

driveway is used, the store would have to be located on one side and the office on the other. Obviously this is not a convenient or efficient arrangement, as it is necessary to cross the driveway to get from one to the other. With the side driveway, the store can extend across the entire frontage if necessary. Here, however, it is advisable to use a portion of the space for the office in order that it may have the advantage of natural light. The store has just as much frontage as it would have with a center driveway.

Quick Service Department

To the rear of the sales and executive departments, there is a storage space which may be used for car storage, although there is only room for one row of cars. The balance of the space might well be used for a quick service department. The storage space in the basement is for the tire and accessory stock.

It will be noted from the plans that



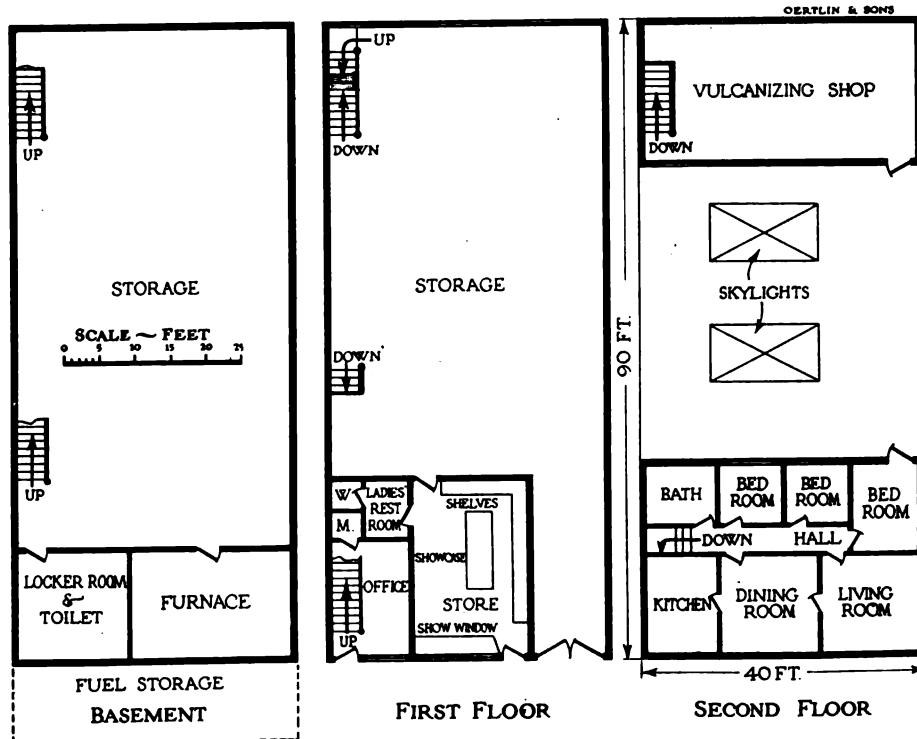
The third story on the front of the building is for appearance only

the second story does not extend the full length of the building. This arrangement makes it possible to provide natural light for the first floor by the use of skylights. The second story at the rear houses the vulcanizing and repair shop. The front portion is laid out in a six room apartment, each room having outside light.

The exterior appearance of the building is unique. It has a distinctiveness that possesses real advertising value. The construction will not be unreasonably expensive, and it testifies to the integrity of the business it houses. Merchants of all kinds are making their buildings sell their businesses, and the automobile dealer has, as a rule, kept pace with this tendency, but occasionally we find one who has not graduated from the days of the horseless carriage when a converted stable was considered suitable for the automobile business. It costs but little more to have a building that looks the part. Why not have one?

Vesper-Buick Will Build New Service Station

ST. LOUIS, MO., Jan. 21—The Vesper-Buick Co., of which F. W. A. Vesper, formerly president of the National Automobile Dealers Assn., is president, will erect a new service station. It will be located at the corner of West Pine Boulevard and Vandeventer Avenue, and will have a frontage of 100 ft. on the former and 210 ft. on the latter. The estimated cost of the new building is \$100,000. The interior of the building is to have general offices, waiting rooms, all of which will be finished in tile and marble, and a large parts department. The west part of the building facing on West Pine Boulevard will be devoted to an oil station.



Fuel storage is provided for by a vault under the sidewalk

Youngstown Carriage Sold to Henderson

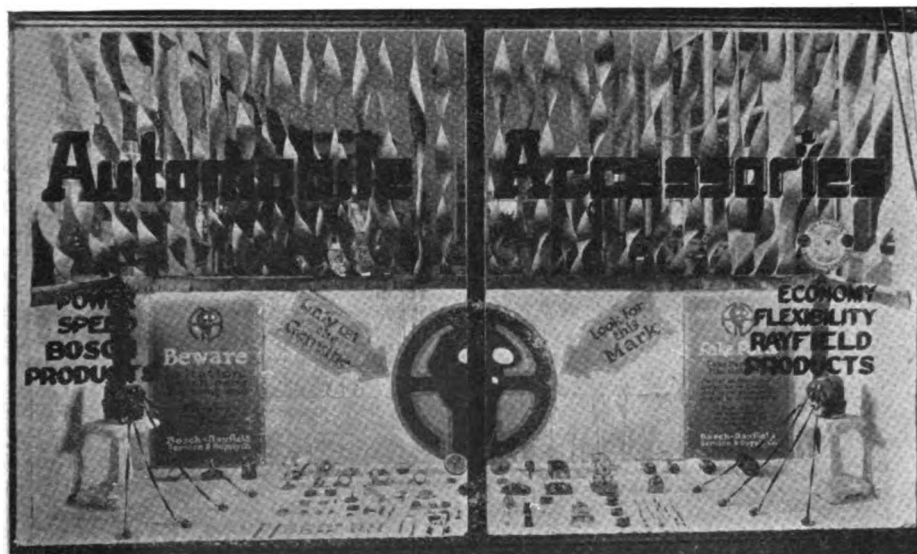
YOUNGSTOWN, OHIO, Jan. 20—Sale of the buildings, land and fixtures of the Youngstown Carriage Co. to the Henderson-Overland Co. was completed at noon yesterday. The price was about \$300,000. Possession will be given to the purchaser April 1. The Youngstown Carriage Co. handled Studebaker passenger cars and Federal trucks. These lines have not been placed with new representatives. The Henderson-Over-

land Co. is distributor for the Willys-Overland line of passenger cars, the Handley-Knight, and the Garford truck. It will continue these lines.

Warren P. Williamson, head of the Youngstown Carriage Co., which he established forty years ago, is the nestor of the automobile business in Youngstown. He retires from the automobile world to devote his time to a real estate business in which he is heavily interested. J. J. Knotts, sales manager of the Youngstown Carriage Co., goes with Williamson.

James A. Henderson, president of the Henderson-Overland Co., began business 11 years ago in the southern part of the city, in a barn for which he paid \$8 a month rent. After buying his first "demonstrator" and wearing out the tires trying to sell it, his capital was not sufficient to buy new tires. Monday he paid a third of a million dollars to Warren Williamson, who in 1881 would have accepted \$300 as a fortune.

This Window Won a Blue Ribbon



This window took a first prize in a contest recently held by the American Bosch Magneto Corp. It features the Bosch trademark in an attractive manner and tells why it is important to look for that mark on parts sold for Bosch magnetos. Credit for this display is due Ernest D. Troutman, Bosch-Rayfield Service & Supply Co., Los Angeles

DEALERS AND OWNERS FORM JOINT CLUB

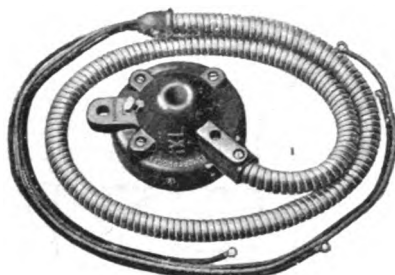
FORT WORTH, Jan. 20—Automobile owners in Fort Worth have decided to co-operate with automobile dealers in solving their mutual problems and accordingly 1500 have joined the joint club. A permanent office with a paid secretary in charge has been opened at 705½ Commerce Street.

The objects of the new association are: first, social and the supplying of road information; second, securing of better laws for the protection of automobile dealers and owners in Texas.

Automotive Equipment

I X L SHORTPROOF TIMER FOR FORDS.

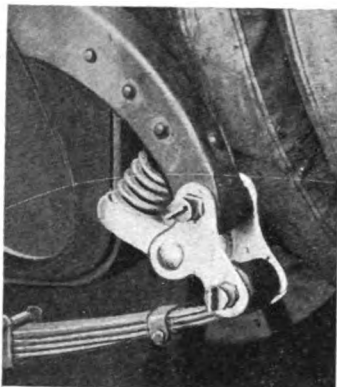
The case of this timer is made of bakelite, and there are no external binding posts. The wiring is enclosed within the case. A feature of the timer is a replaceable composition commutator ring, into which the commutator segments are molded. An oil hole is provided in the front of the case. Price, \$6.50; replacement commutator ring, \$1.25. — Eclipse Specialties Mfg. Co., 549 West Washington Boulevard, Chicago.



I X L Shortproof Timer for Fords

USONA AUTOMATIC RECOIL CHECKS

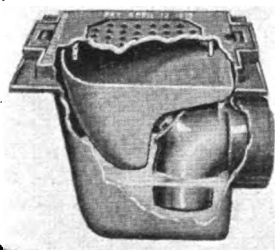
These shock absorbers take the place of the standard spring shackles. It is claimed that they do not interfere with the downward action, but check the upward reaction. Price, per pair, \$15.—Usona Supply, 1549 Michigan Avenue, Chicago.



Usona Automatic Recoil Check

LYNN DRAIN TRAP

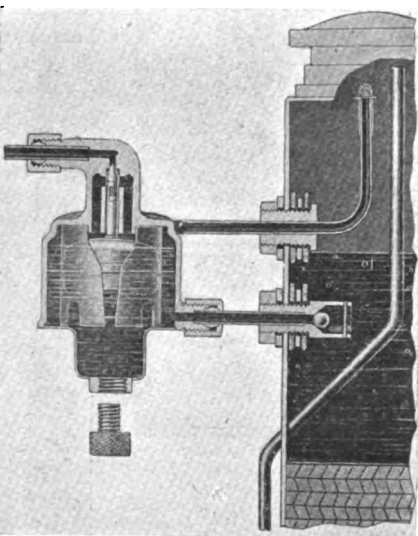
This drain trap is suitable for automobile washracks. It holds back the oil, gasoline, mud and sediment, so that the water that enters the drain is practically clear. It is easily cleaned. Price, 3-in. discharge, \$15; with polished brass grate, \$50; 4-in. discharge, \$30; with polished brass grate, \$70.—Central Foundry Co., 90 West Street, New York City.



Lynn Drain Trap

WEEKS CAMEL

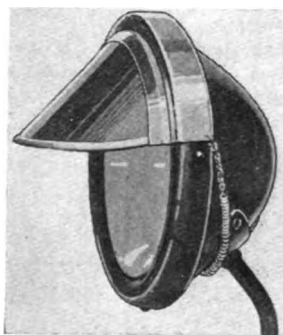
This device consists of a tank attached to the radiator overflow which catches and condenses all the steam and water escaping from the radiator. A float controlled valve attaches into the top of the radiator and connects through tubing into the intake manifold of the engine. As the water level in the radiator falls, this valve opens and the suction of the engine creates a partial vacuum in the top of the radiator which in turn draws water out of the camel tank to refill the radiator. When the proper level is reached, the valve closes. A reserve supply of water is carried in the camel and an alarm whistle blows when this supply is exhausted.—Weeks Mfg. Co., 421 National Avenue, Milwaukee, Wis.



Weeks Camel

PATTON GLARE STOP

This patented device has a visor of pyralin (also made of cathedral glass if preferred), mounted in aluminum, rounded to fit the segment of the lamp,

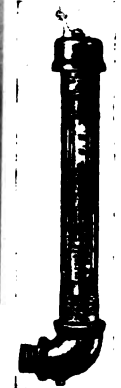
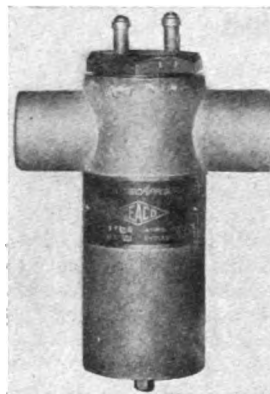


Patton Glare Stop

and held firmly in place by a steel wire spring. It can be placed at any desired angle, 45 degrees being recommended by the manufacturers for best results. Made in sizes to fit all makes of cars. Price, per pair, \$4.—Patton Glare Stop Corp., 741 Santa Fe Avenue, Denver, Col.

ELWOOD GRAVI-METER

An instrument which is attached to the gasoline pump, and which gives a visible and accurate measurement of the gravity of the gasoline. If for any reason the pump is delivering air instead of gasoline, this device indicates the fact. It is claimed that it makes a visible pump out of the invisible type. —Elwood Gravity Gauge Sales Corp., Elwood, Ind.



Elwood Gravi-meter

Electric Radiator Heater

ELECTRIC RADIATOR HEATER

This device consists of a T-shaped casting which is connected in the rubber pipe between the pump and the radiator. An electric resistance unit is screwed into this casting. The resistance unit is wired to a two-point push connection which protrudes from the mud pan beneath the radiator. Connection with any electric socket can then be conveniently made. By carrying an electric cord in the tool box of the car, the device can be used to keep the engine warm at any place where electric power is available.—Cobb Electric Appliance Co., Lanesville Terrace, Forest Hills, Boston.



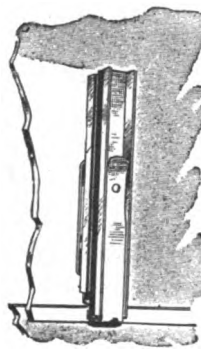
Cronk Auto Pliers

CRONK AUTO PLIERS.

This pliers is known as No. 294. It is of the slip-jointed type which makes it adaptable for large or small sizes of either nuts or pipe. The overall length is 6½-in. The handles are knurled, and the whole is finished in nickel. Price, \$6 per doz.—Cronk & Carrier Mfg. Co., Elmira, N. Y.

JIFFY WINDSHIELD CLEANER

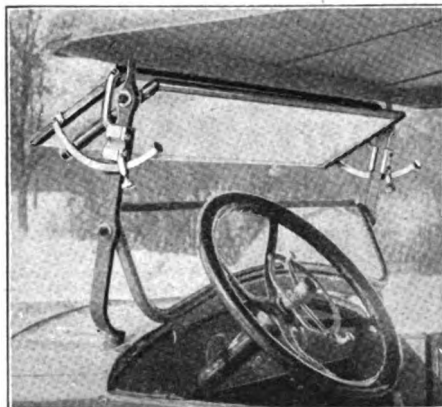
This cleaner wipes and dries both sides of the windshield with one sweep across the glass. It attaches to the upper half of the windshield, where it is held securely in place by a steel spring. They are furnished to dealers in lots of twenty packed in a display cabinet for counter use. Price, \$1.50.—La Vietes Mfg. Co., Hartford, Conn.



Jiffy Windshield Cleaner

RAY-N-SHIELD

This is designed for touring model windshields, and attaches to it by means of clamps. It is adjustable from the inside of the car even if the side curtains are in position. Castings used are of bronze, nickel plated. Frame section is standard windshield construction furnished with tinted green or amber translucent glass. A model is furnished for enclosed cars. Price \$25.—Western Windshield Works, 1513 Hennepin Avenue, Minneapolis, Minn.



Ray-N-Shield

NOTARE CURTAIN ROD THIMBLE.

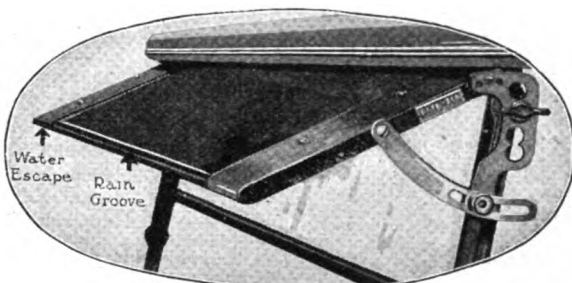
This device is to prevent the curtain rods wearing through the curtains. It is made in two shapes, oval and round. It is constructed of steel, finished in black enamel. No tool are required for installation. George W. Scott Co., 1831 East Fifty-Fifth Street, Cleveland.



Notare Curtain Rod Thimble

BELL SAFETY BUMPER

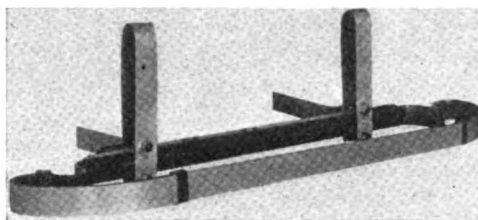
Running the entire width of the chassis is a 2-in. channel. Passing over this channel, and bolted to it, is a strip of $\frac{1}{4}$ -in. spring steel which is curved into arms at each end. An unbreakable strip of fabric belting passes over these spring arms. Between the belt and the channel there is a space of 8 inches—that is ordinary shocks will be taken up by the belting, but in case of accident the flexible belt allows the shock to be taken by the channel. There are two uprights, one at each end of the channel, which protect the lamps from damage, should the bumper of another car ride over this bumper. Similar protection below the bumper is also afforded. The attachments are universal, and the bumper can be attached to any standard make of car. A model for trucks is also manufactured.—Bell Safety Bumper Co., Inc., 1332 Fifty-sixth Street, Brooklyn, N. Y.



Rain-Sun Vision Shield

MORE-JONES BABBITT

More-Jones Extra Copper Hardened Babbitt contains approximately 40 per cent tin, and is hardened with copper. It is intended for high speed, medium pressure service. Other brands put out by this company are Hoo Hoo, Genuine, Phosphor Bronze, Rex and Improved.—More-Jones Brass & Metal Co., St. Louis, Mo.



Bell Safety Bumper

SHARPE ELECTRIC CARBURETER HEATER

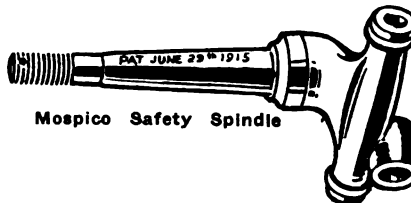
This heater consists of a flexible metallic band which clamps permanently around the carbureter bowl and is connected by duplex cord to any point on the ignition system. It is operated by push button switch on the instrument board or other convenient place. Thirty seconds pressure upon the switch button is said to be sufficient to raise



Sharpe Electric Carbureter Heater



Julian Visible Pump



Mospico Safety Spindle

the temperature of the fuel in the carburetor to a point at which it will vaporize quickly, enabling the cylinders to draw in a rich warm starting charge. The heater is designed for use on all cars having 6 volt (3 cell) battery and which are equipped with round-bowl type carburetor, such as the Holley, Kingston, Johnson, Gardner, etc. It is also made in 8 and 12 volt sizes. Price \$3.75 complete.—Sharpe Electric Appliance Company, 502-508 Murphy Bldg., Detroit, Mich.

JULIAN VISIBLE PUMP

This pump measures the gasoline in a government inspected, sealed gallon glass cylinder, which is located inside of an eight-gallon glass cylinder to protect it from expansion and contraction due to temperature. The gasoline is measured and pumped at the rate of 12 to 20 gal. per minute, speed regulation being obtained by adjusting the half horsepower motor which drives the pump. A register in the pedestal of the pump keeps a record of daily and grand total sales, and prints and delivers a ticket for each sale. The pump can be set to deliver any desired number of gallons automatically. The pump is also arranged so that the individual sales of different salesmen can be recorded.—Julian Pump & Mfg. Co., Jamestown, N. Y.

MOSPICO SAFETY SPINDLES.

A replacement front wheel spindle for the Ford car. This spindle has an offset of $\frac{1}{4}$ -in. which sets the center of the wheel this distance back of the center line of the axle. This gives a castor action to the front wheel, which is said to reduce the labor of steering.—Motor Spindle Corp., 138 East Jefferson Avenue, Detroit.

RAIN-SUN VISION SHIELD

The Rain-Sun vision shield is so constructed that it fits any car either open or enclosed. It is made of sheet steel and finished in black and green enamel with heavy nicked brass adjusting braces. The rain groove along the lower edge prevents rain from splashing on the windshield.—Rain-Sun Vision Shield Co., Los Angeles, Cal.

MILLERSBURG REAMERS.

These reamers are said to be made of the highest grade carbon steel, and each tool is guaranteed. The following types are included in the complete line: hand, expansion, taper shank, fluted chucking, Rose chucking, shell and taper pin. A full set of reamers for the Ford car is also manufactured. High speed steel and spiral fluted reamers are also produced.—Millersburg Reamer & Tool Co., Millersburg, Pa.



Millersburg Reamers

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Proposes Distribution Plan

This writer suggests the establishment of co-operative distribution centers as a means of solving the jobber-manufacturer question.

Editor Motor World: I read with interest the article on page 12 of the Jan. 5th Motor World, giving the jobber-manufacturer controversy regarding price guarantees and jobber co-operation with the manufacturer.

Why not have co-operative distribution of accessories by the manufacturers?

In Minneapolis the tire men have taken advantage of the Northwestern Terminal, an institution built for them and run on an economical scale so their distribution costs are greatly reduced. But here each tire manufacturer keeps his own organization intact and each one serves his customers direct.

My idea would be for the manufacturers of accessories to form a distributing organization having a depot in every jobbing center, and distribute the cost of maintenance pro-rata based upon the number of individual packages handled for each manufacturer by the depots.

Every manufacturer who calls upon the retail trade for the jobber would thus call upon the retail trade and ship direct from his own supply at the depot, the depot handling the collections, and every manufacturer extending the same terms to the trade.

One advantage of this would be that the manufacturer could more easily and accurately judge the demand and govern his output accordingly. This accuracy would increase with the results of increasing the year's business before him, or should I say with the results of past year's business before him as this method of distribution is continued.

It is a fact that there are many accessories on dealers' shelves which are dead numbers, and nearly all dealers have some of this merchandise. This has not been due so much to the fact that the goods were not first class as it is because manufacturers of comparatively light finances have made the once over and then not kept up creating the demand among the ultimate consumers, due to their having fallen by the wayside and some more aggressive manufacturers making the demand greater for his line by his more strenuous efforts. With this co-operative form of distribution the heavier manufacturers would form the organization and the lighter ones would drop out of existence, so that the goods

which would be on the dealers' shelves would be more or less standard and the demand would be stabilized, and the manufacturer could more systematically feed the demand for his products.

We already have a jobber in the field who is working along these lines. It is the United Motors Service. It main-

The MALE of the Species

(with apologies).

A FOOL there was and he made a deal
(Even as you and I)
For a rubber rag and a hunk of steel.
We called it a tub with a steering wheel;
But the fool, he called it an automobile,
Even as you and I.

Oh the toil we waste and the oil we waste,
And the work of our blistered hand
Is spent on a motor that would not go,
And now we know that it never could go,
And we did not understand.

A fool there was and his goods he spent,
Even as you and I,
On a wreck of a motor that never went
And a body with many a yawning dent;
But a fool must follow his natural bent,
Even as you and I.

Oh the gears we stripped and the tubes
we nipped,
And the excellent trips we planned
For the sake of the woman who didn't
know why—
Who raged as she waited and time went
by,
And did not understand.

The fool was stripped of his foolish hide,
Even as you and I,
When he came to explain that they
couldn't ride,
And the lady daintily cast him aside,
So some of him lived but most of him
died,
Even as you and I.

It isn't the shame and it isn't the blame
That sting like a white-hot brand.
It's the coming to know for what we fell
While the crook that stung us laughed
like H—
And we didn't understand.

—MRS. JOHN J. CORPER

Wife of John J. Corper, salesman with
A. J. Picard & Co., jobber, New York.

tains its own branches and ships direct wherever its men make connections. At present it calls on only the larger accounts, but no doubt will ultimately comb the territory as the demand for its products increases. Being connected with the General Motors Corp. it is practically in a position of a manufacturer who sells his own goods direct, as the G. M. C. controls most, if not all, of the factories which make accessories for the United Motors Service, Inc.

Partially in order to combat this, U. M. S. competition would find an organization of accessory manufacturers to be a good thing.

We know from having grown up in the wholesale hardware business, and from having conducted a retail accessory store, the margin between the manufacturer and the retailer, and agree that for the service rendered his margin is out of proportion. This margin would enable the manufacturer to do his own distributing, and as the distribution became perfected and the costs decreased the manufacturer could either increase the retailers' profit as an inducement to push his line or could cut the retail price to keep out competition, or could pocket this margin himself to protect himself against his risk in carrying stocks.—Northwest.

He Laughed First, and Then—

This jobber wrote a letter to Motor World in which he expressed his views as follows:

Editor Motor World: I just happened to pick up your issue of Jan. 5 and got as far as page 12. I laughed a good deal about this page until I came to the realization of the thought that the man who wrote that article really meant what he said, then I realized it was not entirely a laughing matter.

To my mind there is just one answer to your friend's idea, and that is this: If he does not like the present method of distributing his merchandise, this is a supposedly free country and he is quite at liberty to try any other method that might appeal to his imagination.

We are the last people on earth to try to foist ourselves onto the community as a useless load. If there is no place for us we want to find a job doing something else. The only thing that we ask to be relieved from is the necessity of financing your friend in his new experiment.—Twin Cities.

Motor World Idea Helps Sell Used Cars

A Seattle dealer saw Motor World's suggested idea for a slogan in used car advertising, "Our Platform—Satisfaction," and adapted it to a used car display in his salesroom window. He writes:

Editor Motor World: Regarding our recent used car display we got the idea out of Motor World and thought enough of it to try it out during our used car show. Will say that it caused quite a bit of comment. We anxiously await each issue of Motor World for new ideas. —Great Western Motors, Inc., V. C. Foree, vice-president.

Repairshop Shortcuts

No. 2817—Tool for Grinding in Buick Valve Cage—An old socket wrench, which has the socket broken off, is turned down to pass through the guide, and then threaded. Two nuts are used, as illustrated, to hold the cage during the grinding operation.—J. P. Bittner, New York City.

No. 2818—Curtain to Keep Cold Out—A canvas curtain is stretched across the doorway. Sufficient headroom is allowed to permit the average car to pass under, and trucks can brush it aside. This will help to reduce the heat lost when the door is opened in winter.—L. B. Schuyler, Auto Supply Co., Lock Haven, Pa.

No. 2819—Pulley for Generator Testing—The illustration shows a wooden pulley for use in testing generators. Interchangeable bushings of various inside diameters are provided to take care of the different sizes of generator shafts.—J. K. Bal, Auto Electric Co., Milwaukee, Wis.

No. 2820—Locking Bolts—Small stove bolts, such as those used to hold the fenders, are locked by sawing the end of the bolt part way, and then spreading the ends apart as shown after the nut has been put on.—A. W. Brooks, K. W. Auto Co., Raymond, Wash.

No. 2821—Tool for Setting Brake Collars—The construction of this tool, which is used in setting brake anchor pin collars, is explained in the illustration.—A. G. Raabe, Long Island City, N. Y.

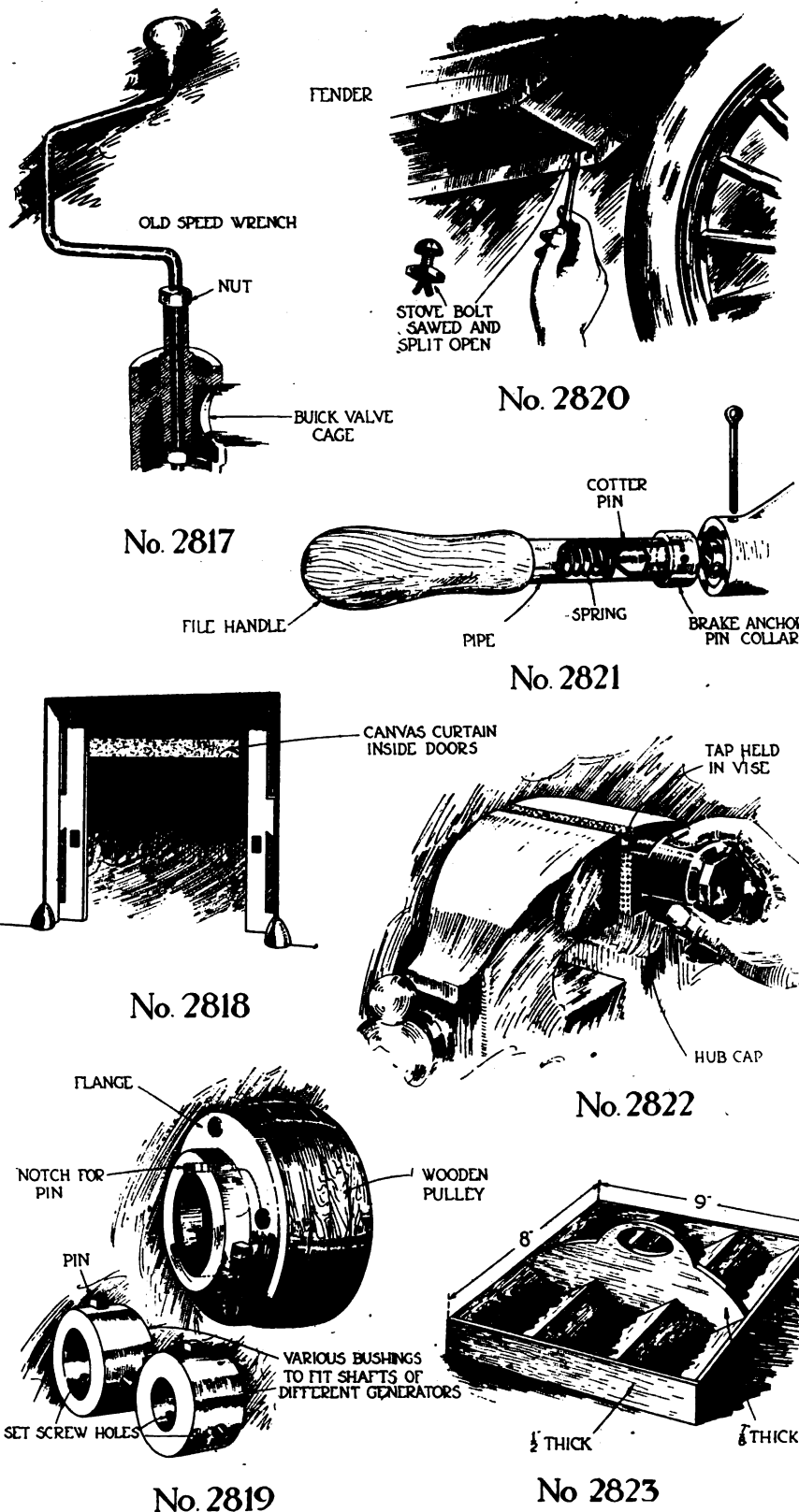
No. 2822—Renewing Threads—The threads on radiator and hub caps are renewed by turning the cap on a tap of the proper size, which is clamped in a vise.—C. M. Jenkins, Dodge City, Iowa.

No. 2823—Cotter Pin Holder—This is divided into six compartments for various sizes of cotter pins. It is provided with a handle to facilitate its use. The overall dimensions are 8 x 9 in., and with the exception of the handle, which is $\frac{3}{4}$ in. thick, $\frac{1}{2}$ -in. boards are used in its construction. S. J. Marks, North Broad Street Garage, Woodbury, N. J.

MAKE A DOLLAR

SEND in a sketch and a brief description of the device you used to solve some particularly difficult problem. Sign your name and furnish us with the name and address of the concern with which you are connected.

Motor World will pay a dollar for every idea accepted for publication.



Winter Business

Send in a Winter Business Idea—Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management directed toward getting winter business and winter profits. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever we shall be glad to shape it up for you.

Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Used Cars Given as Bonuses Are Effective in Stimulating Sales Effort

THOSE automotive dealers in all parts of the country who are wrestling with a used car "problem" may find suggestions in the plan put into effect by the W. P. Herbert Co., distributors for the Chandler and Cleveland cars in Southern California.

In lieu of the customary bonuses that this company pays its employees, used cars valued at \$17,000 have been turned over to the employees for disposal. The value of the cars given the employees is equivalent to 5 per cent of the 1920 earnings of the salesman and 10 per cent of the yearly salaries of the shop and accounting departments. Every member of the firm who had been connected with the company for three months or over shared in the distribution.

The idea of the company is to focus the interest of every employee on automobile selling.

It is believed that the plan will have not only the effect of moving the used cars and making room for the sale of new cars, but that by focussing the interest of the entire organization on selling, by making every member personally interested in selling, there will be built up a stronger desire on the part of the employees to lend assistance at every opportunity to the merchandising of the firm's products.

The proposition was made to them at a mass meeting and they became very enthusiastic. The company provides a salesroom for selling the bonus cars without charge for rent. A committee has been named that has complete control of all plans and procedures. The committee employs salesmen and has complete jurisdiction upon every detail. The operation is entirely independent in every way from all other lines of activity with the exception that the Herbert company will handle the paper when time sales are involved.

The cars comprising the "bonus" stock are selected by lot from the used car department. No executive of the company will have any part in conducting the sale. The effect of having an entire organization boosting heartily for a used car sale is expected to produce quick re-

sults in disposing of the stock of bonus cars and is bound to stimulate interest in problems of salesmanship. The project has got away to a good start and developments will be watched with interest by every automotive concern in the city.

A Used Car Ad That Helps Sell New Cars, Too

THE Dort Sales Co., formerly wholesale distributor of Dort in this territory, took over retail sales in Kansas City, on Dec. 1. Several new cars were sold in

Dort Sales Company

has the following cars, offered for sale with our indorsement. They are subject to careful scrutiny, and are exactly as represented by our salesman who will show them to you:

CHEVROLET 4-90—3 months old, formerly owned by Timothy Kelly, 4036 Troost \$750.00
DORT MODEL 11—used as a family car, formerly owned by A. T. B. Dunn, 5312 Wyandotte \$700.00
DORT MODEL 11—satisfactorily owned by J. M. Grindinger, 2646 Belleview \$750.00
DORT MODEL 15—used as demonstrator by one of our road men—Mr. R. E. Hill \$1,100.00
DORT MODEL 15—used as demonstrator by one of our men, Mr. H. J. Smith \$1,100.00

We are putting another road man's demonstrator through the Serve You Department and this, when ready, will be offered at \$1,050.00.

Please understand that our used cars have all been carefully investigated. The above owners can tell you how they have served them.

Our Serve You Department extends its courteous attention to used car purchasers as well as to our old owners.

Terms can be arranged privately.

Dort Sales Company

19th & McG. Streets
 Exclusive Dort Dealers.
 Bell Grand 1096. Home Harrison 9728

Advertising used cars with names of former owners

the next two weeks, and some used cars taken in on trades. C. B. Magill, manager, has struck a new note in his advertising of these used cars. It helps to sell the used car, and also helps to promote the good reputation of the Dort.

His plan is to advertise the used car, with the name of the person formerly owning it, or the person using it. Suf-

ficient data is given to convey a clear notion of the probable condition of the car.

The advertisement also says:

"Please understand that our used cars have all been carefully investigated. The above owners can tell you how they have served them."

The double-edged feature of the method, consists of the fact that the company is telling the names of customers who have bought new Dorts. And the inference is given that, if the company is willing to base a sale of used car on the satisfaction of the former owner in that car, surely this customer must have thought the Dort was a great deal better. to buy it.

Owners Appreciate This Service

THE putting of chains on passenger cars, in the garage, when the condition of the streets warrant it is one of the methods employed by a Columbus garage in boosting its trade and in making its customers feel good. This garage is in a section where its customers drive to their business and probably 85 per cent of the cars stored in the place are used for that purpose. On an icy morning, the manager has his men put the chains on the cars of men whom he knows would desire them and in that way saves the men the time of waiting for the chains to be adjusted. This has proved a good move and is worth more than the time required to oversee the work.

Sells Accessibility of the Garage

THE Reliance Garage in Columbus has adopted a novel method of advertising itself which appeals to the public and which has resulted in a marked increase of business in every way. This garage is located in the down-town section and thus easily accessible to down-town residents and business men. The garage management has sent out plans of the surrounding city to show the entrances and the manner in which the garage can be reached. "Only 200 feet from High Street," "one minute to get in or out" and "Two minutes from any section of the principal business district" are the catch phrases on the diagram.

Dealer's License Fee Table & Good Will Builder

At least one automobile dealer in New Orleans saw the opportunity to do a favor to the motorists of Louisiana, and, at the same time, to get the name of his firm prominently before every automobile owner in the state. The opportunity came when the secretary of state issued the call for the payment of automobile licenses for 1921. Some 60,000 automobile and truck owners paid licenses for 1920, and it is estimated that there were between 9,000 and 10,000 in the state who did not pay their license, but escaped by various subterfuges. This year, a special effort is being made by the State to collect license fees from all the automobile owners, and the secretary of state estimates that at least 20,000 more licenses will be issued this year than last.

Frank & Weinberger, automotive merchants, of New Orleans, immediately compiled a table showing the license fee for every car on sale in New Orleans, with the number of the model, the rated horsepower, bore and stroke of the engine, the fee being 25 cents per horsepower, with a minimum fee of \$5. Then this firm published this table with its compliments, in every newspaper in New Orleans, and in many of the papers in the larger towns of the state. It was one of the most widely-circulated and commonly-read advertisements ever put out by an automobile dealer in the South, and was the subject of much favorable comment by motorists, and other dealers in New Orleans.

A Battery Business Builder

THE Pope Battery Co., Hartford, Conn., believes in letting the customer see things for himself. When a customer comes in to have his battery tested two different instruments are used to record the condition of the battery. This method permits of detecting which particular cell is ailing. When the customer is apprised of the fact that one or more cells are dead, naturally he likes to be shown and the battery folks are there to show him. The battery is placed in a rack, the cells steamed for five minutes or so and then removed. Then the owner can see the plates for himself and just what the condition of the battery really is. He doesn't have to accept the firm's word. This method has worked out very satisfactorily as a business builder.

Top Repairing Profitable

MANY a motorist, trying to make his old top last through the winter on his open car, gives up the idea before spring and orders a new top or has the old one patched or recovered and relined. Saffold Garage, Cleveland, employs a good handy man (and a regular top tailor from a trimming shop, when available) to take care of these top repair or replacement jobs. Owners appreciate evening, Saturday afternoon, or holiday

MACK AUTOMOBILE CO.		CONSOLIDATED BALANCE SHEET	
OCTOBER 31, 1920.			
ASSETS		LIABILITIES	
CURRENT ASSETS		CURRENT LIABILITIES	
Cash	72 349 62	Accounts Payable	65 658 92
Accts. Rec.-Service	16 721 43	Customers Deposits	40 793 65
Notes Receivable	173 284 98	Accrued Liabilities	5 897 43
		Total Current Liabilities	132 350 20
INVENTORIES		Reserve for Depreciation	7 895 42
New Cars	156 763 21	" " Taxes 1920	32 563 83
Used Cars	42 789 33	" " Taxes 1921	40 000 00
Parts	75 384 76	Capital	100 000 00
Acc. & Supplies	25 341 89	Surplus	319 656 63
SECURITIES			
Liberty Bonds	30 000 00		
Chamber of Commerce	100 00		
Total Current Assets	571 784 92		
FIXED ASSETS			
Machinery & Equipment	17 654 00		
Furniture & Fixtures	15 639 00		
Service Trucks	4 500 00		
Demonstrators	12 248 00		
	50 139 00		
DEFERRED CHARGES			
Coal	1 250 00		
Prepaid Insurance	5 240 00		
" Expense	587 35		
Stationery & Printing	2 854 00		
Total Deferred Charges	9 931 35		
Total Assets	631 825 27	Total Liabilities	631 825 27

A stable, going mercantile concern should be able to borrow \$200,000 on a statement like the above. The difference between A—total assets, \$631,825.27—and B—\$172,789.64, total of the items indicated by the three arrows, or the total of liabilities considered in making the loan—is \$459,035.63. A \$200,000 loan would be less than half the balance of assets over liabilities, a ratio usually considered a good loan risk.

If your assets are \$631,000 and you can present a balance sheet like this you ought to be able to borrow \$200,000. If your assets are half as great and liabilities correspondingly low you ought to be able to borrow \$100,000, and so on down the line.

The ratio is not arbitrary, of course, but is a good example of a basis for conservative lending. But assets alone won't get a loan. Without an accounting system that will enable you to make up a balance sheet that means something you may be unable to borrow—or at least to borrow as much as you need.

This Dealer Knows Where He Stands—Do YOU?

You can talk intelligently to your banker—and he will listen—if your accounting system will produce a financial statement like this. The table and the accompanying explanation was printed first in the Winter Business Number of Motor World. It was furnished by a successful big city dealer. Study it—not the figures so much as the items

work. The plan has proved profitable, although the top and top repair stock carried should be restricted to current trade needs and carefully stored and handled.

Talking About Personality in Business

WHEN in Arizona, do as Arizona does," explains the unique business card distributed by Jack Sharon, a salesman for Babbitt Bros. Trading Co., distributors of Mack trucks in that State.

"If we went out to call on prospects wearing our glad rags, they'd think we're



city slickers, so it's army breeches, flannel shirts and leather vests for us," is the way Sharon explains his apparel. He wants all his friends and prospects to know his identity with the goods he sells and the way he looks when selling them, so that explains his "card."

Talk about putting personality into business, it certainly is easy for Sharon, to qualify with the personality and his firm vouchers for him as a business getter.

Dark Room a Service Feature Here

L-M GARAGE, Cleveland, has partitioned off a 9 x 14 ft. room in one corner of the building, covered up the windows and re-inforced the walls and doors toward the shop. This makes a silent and dark room, convenient for locating elusive noises and testing and focusing lights. Exhaust gas is piped through a flexible hose under the floor, and two lights are available. The added service facilities of this room have been written into the advertising and form letters by Manager Waldo. The exclusive advantages gained offset the space lost for active repairs, and particular patrons like this service.

An Effective Business Card That Gives Car Prices

A BUSINESS card that not only introduces the bearer but carries a picture of the car he sells and gives specifications and prices on all models is used by the Nash-Newark Co., Nash car and truck dealer in Newark, N. J. A card is printed on a piece of white stock, 7 x 2 in., and is folded at the center of its length, forming a four-page booklet; the front page contains the customary business card form. The inside pages contain a cut of the car and with specifications, and on the back of the fourth page is given a complete list of prices on cars and trucks delivered.

They Must Be Sold!

Was This Southern Dealer's Decision and It Moved His Used Car Stock

A Story of How the E. R. Parker Co., Atlanta Distributer of Cleveland and Chandler Cars, Faced a Strong Buyers' Market and Sold

WHEN the E. R. Parker Co., Atlanta distributer of Cleveland and Chandler cars, got ready to move into its new building it decided to *move* the used cars in stock—but not to the new home. It decided to move them from the extra building they had occupied for the past year into the possession of owners. The decision was: **THEY MUST BE SOLD.**

That made a man's size job, especially when one considers the present conditions in the South, due to the low price cotton was bringing and its serious effect on all business.

THAT the effort actually did sell fifteen cars in two weeks is considered remarkable under these conditions, but what is even more pleasing to the Parker firm than the fifteen sold cars were dozens of new prospects unearthed and the "pep" that was infused into the entire organization, especially the salesmen, through the effort.

When the decision to move the used cars was made Parker called upon "Les" Rawlings, head of his sales promotion department. What Parker said to Rawlings was something like this: "We are going to move into the new building in a few days. In the meantime we have got to sell every used car on hand because there's not room for them in the

new place. It's up to you to do it.

Rawlings wasn't disturbed. It wasn't the first time his "K. O." had handed him a real job with an "it's up to you" appended. Rawlings had acquitted himself with honor in the late war—he was quite familiar with this "it's up to you" business. It was considered quite the thing in the army—eh, what say, buddy?

Anyway, Rawlings got set to work fast. The used cars had to be moved out of that extra salesroom the boss was paying rent for and into the private garages of owners.

The first thing Rawlings did was to pick out every one of Atlanta's suburbs—East Point, Oakland City, Hopeville, Decatur, etc., and assign one member of "Parker's Million Dollar Sales Force"—that's what they call it in the South—to each of these suburbs. In a conference Rawlings said:

"Each of you will go to every garage, introduce yourself. Talk with the proprietor. Find out whether he is doing much work on Cleavelands and Chandlers. Find out what this chap thinks of the outlook in his town and then, most important of all, if he knows any real used car prospects.

"You probably will find that every garageman has one or two such prospects. Get him to let you have their names. Let him know that he won't be forgotten when a sale is made."

Next, Rawlings decided that if his was to be a real used car selling campaign everybody in the outfit must be behind the big selling effort. It was decided to clear the way for the big push—make everything but selling used cars secondary during the campaign. From negro car washers to heads of departments, everybody in the Parker organization became a used car salesman.

They thought about used cars, slept them and talked them for a whole week. And then, when rain marred things a little for two or three days, it was de-

How Parker Advertised

GREAT REMOVAL SALE OF 40 REBUILT CARS

Starts Monday Morning, November 15, at Our Place of Business, 316-18 Peachtree Street, Continuing For One Week—During Which Time We Will Be Open From 7:30 A. M. to 9 P. M. at Your Service

Bargain No. 1
Chandler Dispatch model, A-1 condition—
\$500.00 Cash.
Balance easy monthly payments

Bargain No. 2
Dodge Touring or Roadster. Take your pick, good condition, recent model—
\$300.00 Cash.
Terms on balance.

Bargain No. 3
1916 Buick Touring Car in first-class running condition, looks like new, for—
\$350.00.
Terms may be arranged.

Our new building, at the corner of West Peachtree and Linden Streets, is rapidly nearing completion and rather than move our stock of rebuilt cars to our new home, we have decided to offer them, beginning Monday morning, in one big sale at greatly reduced prices.

These cars are all in first-class condition and have been thoroughly overhauled, rebuilt and repainted.

In this stock you will find practically every model and make that you might desire, including closed cars, roadster, sport cars, family cars and business cars—just exactly forty of them.

We invite you to inspect these automobiles and will be only too glad to have one of our salesmen thoroughly demonstrate any one in which you might be interested.

WE WILL GUARANTEE
Every
CHANDLER and CLEVELAND
30 DAYS
24 Hours Free Trial on All Makes

Bargain No. 4
1920 Cleveland Touring just traded in, run less than 2300 miles—
\$375.00 Cash
Balance easy monthly payments

Bargain No. 5
A 1919 Dort Touring, runs and looks good for
\$475.00.
Think of it, easy terms for balance

Bargain No. 6
Overland Roadster good condition, for—
\$560.00.
Small cash payment, balance easy monthly payments

E. R. Parker Motor Company

316-318 Peachtree Street—Atlanta, Ga.

Distributors Chandler and Cleveland Automobiles

In his newspaper advertising Parker took the public completely into his confidence and told the story of the sale in simple, direct language

cided to continue the campaign for another week.

The sale began one Monday morning. It continued until 9:30 each evening to the end. But that Monday morning of the opening everybody that had been enlisted in the used car drive climbed into a used car and drove off. They went in all directions, north, east, south and west.

For a week before the opening the company advertised in the classified columns of the three Atlanta newspapers announcing the coming sale as the biggest and best sale of rebuilt automobiles that ever had been held in the South. Price reductions of \$200 to \$300 on each car were promised. The fact that the cars had to be sold, and could not be moved into the new Parker building was kept dominant in the advertising.

Furthermore, two guarantees were made which were somewhat unusual. On all Cleveland and Chandler rebuilt cars Parker granted the buyer a positive thirty-day guarantee. A refund of the full amount paid was promised if the customer was not satisfied with the purchase any time during the first thirty days. On all other makes the guarantee was the same save that it was of only twenty-four hours' duration.

The classified ads occupied a ten inch depth two columns wide and on the Sunday just before the campaign opened

half page display spreads were used. During the campaign the space expanded to full page spreads.

In addition to this advertising 5,000 printed circulars were distributed listing

Moving Used Cars

SELLING fifteen used cars in two weeks in a territory that was smarting under the effects of low price cotton is considered a remarkable merchandising accomplishment in the South.

How the E. R. Parker Co., Atlanta distributor of Cleveland and Chandler cars did it is told in this story. The use of garages in the territory, the guarantee feature and the mobilizing of the entire Parker organization for the effort are interesting.

Read it.

every used car included in the sale with specifications, etc. These circulars were widely distributed in the factory districts by the Parker salesmen; each man loading up with a quantity of them and driving to the various factory districts in his demonstrator. At the same time every thoroughfare leading into Atlanta for a distance of several miles was posted with large signs, advertising Parker's used

car campaign as the "biggest sale of rebuilt automobiles ever held in the South." Naturally all of this advertising was widely seen and there were very few people in Atlanta or its surrounding territory who were not aware of the fact, at least, that something in the way of a used car sales campaign was in progress at E. R. Parker's place in Automobile Row during that week.

Salesmen also visited, during the week preceding the sale, every automobile dealer in every town within a radius of several miles of Atlanta. These dealers were assured a liberal commission for every sale made by them in their territory during the campaign.

Three days before the sale a young lady at the telephone called up every automobile clearing house in Atlanta, of which there happen to be several, acquainted the proprietor or manager with the facts regarding the coming Parker sale and asked him to investigate the bargains that were offered.

As a matter of fact Rawlings left no stone unturned to "let the whole world know" that the E. R. Parker Co., of Atlanta, was staging the biggest used car selling campaign the South had ever seen during the week of November 20th. Parker told Rawlings that the cars simply had to be sold, and Rawlings did his level best to carry out the wishes of the "K. O."

"\$25 a Day Off Until Sold"

This Was the Price Bait That Successfully Sold Used Cars for a Cincinnati Dealer

ARE you one of those dealers with a surplus of used cars who wants his space more than he wants the cars?

The Citizens Motor Car Co., of Cincinnati, was in this fix a few weeks ago. It did the best thing possible—it sold the cars.

Thirteen used cars were set aside for immediate sale. Eleven days later, the Citizens Motor Car Co. had the cash in hand for 18 used cars. That is, it sold the original 13 and with them five others which had not been included in the sale.

Every sale was made for cash. The company is satisfied, the customers are satisfied—what more could be asked?

The company handles the Packard and Overland passenger cars and Packard and International trucks. Finding it needed some of the space occupied by the used car department, a survey was made and it was found that the removal of 13 cars would just about fill the bill. So the 13 cars were set aside for a quick sale.

The cars that were chosen were principally the better-known makes, which had been taken in exchange, but were old models and consequently low-priced cars. Their selling price ranged from \$175 to \$600 and they had been in the company's hands for from a few weeks to six months.

The cars were set one side and a series of advertisements worked up. Through

these advertisements the public was notified that the company had 13 used cars for sale, the prices to be decreased \$25 a day on each car until they were sold. The first day's prices were the original prices at which the cars had been held by the company. The next day the prices of all unsold cars were lowered \$25, the second day \$50, etc. The last of the 13 cars was sold on the eleventh day. During the sale, five other used cars were sold to persons who answered the advertisement and did not see in the special lot just the car they wanted.

The advertisements used were three-inch ads, two columns wide, on the classified advertising pages. Their cost was insignificant, compared to the results of the sales.

The cars were sold "as is." The prospect was permitted to make as thorough an examination as he desired, but no demonstrations were given. Each prospect was made to understand that the cars had originally been held by the company at the original selling figure, which the company had believed to be a reasonable price.

The company stuck to its \$25 a day reduction literally. One man who had \$175 and wanted to buy a \$250 car was told he would have to wait three days and take a chance on someone else buying the car he wanted, unless he could

raise the necessary amount of cash and purchase another. He got the cash and took the car.

While the company lost financially by this method of moving the cars, the loss was more than made up, according to William S. Voris, manager of the used car department. Incidentally Voris is the "used car manager" but bears the title of "Exchange Passenger Transportation Manager." It carries a certain amount of dignity for the business.

The company wanted to move the cars quickly. One alternative was to dispose of them to a parts dealer or a junkman. The money realized by the method used, while not what the cars had originally been held for, was far ahead of the amount that would have been realized from a junk dealer or parts dealer.

The cars were moved at a minimum of expense, the space they occupied was made available for cars with a greater income and negotiations were opened with several visitors that are expected to lead to early sales of other used cars. Besides, the sales were made in an unusually dull season and in the winter.

Successful? The company has already arranged to use the same method at intervals in the future to dispose of quick-sale stocks. It also is preparing to test the plan out on better and higher priced cars at its branch in Dayton.

Business Starts in New York Zone

SHOPPING GIVES WAY TO ACTUAL BUYING

Sales in Week Exceed Former Month—Reasonable Business Now Lining Up

NEW YORK, Jan. 24—The week following the New York Show has brought an inspiring revival in automobile sales, wholesale and retail. A canvass of a majority of the distributors and factory branches shows that cars have been moving in much better volume than in November and December and in a number of places retail sales of the past week, nearly all traceable to the show, have exceeded in volume deliveries for the entire month of December.

Distributors and factory branch managers generally are agreed that dealers in the territory have a new lease of life. There were a good many show visitors from the territory, particularly from the suburban towns of New York, New Jersey and Connecticut, and the names of "foreign" prospects, promptly delivered to dealers in the outside towns, have already yielded an encouraging number of sales. Outside dealers who have been into New York or have written in since the show say that the ice has been broken and their towns are showing unmistakable signs of a steady, though gradual return of buying.

In the retail end there has been a noticeable revival in the metropolis itself. There are more people in the salesrooms than at any time since October, some have bought during the week and others are definitely in the market for March or April delivery. Sales this week have naturally been in most cases for February delivery to save the owner from obtaining a 1920 license, which expires at the end of this month.

Six Sales in One Week

As an instance of the "pick-up" in sales, one car in the \$2500-\$3000 class had six sales this week, more than in all of December and one in the low-priced class had six a day the first four days following the show. All along the line there have been some sales and both in personal contacts of salesmen and through mail efforts there has been an encouraging response to work on prospects listed at the show.

All along the row, in addition to actual sales and perhaps more important, there is a better feeling among dealers and salesmen. Nobody is looking for business equalling the 1920 volume, but everybody is confident that a reasonable business is attainable and everybody is cheerfully working to get his share.

Truck sales have picked up slowly ever since the first of January. Business is far from normal but it is improving surely.

There are more used car inquiries than there were before the holidays and dealers have been able to take in used cars at more favorable prices than prevailed the last of the year. This is always the case as spring approaches and the hankering for a new car becomes stronger and dealers are finding encouragement in this fact itself.

The New York Show, never a big selling show, has done a lot for the trade this year and even the most conservative distributors are paying it a well deserved tribute.

ELECTRIC VEHICLES TO SHOW IN NEW YORK

NEW YORK, Jan. 24—Manufacturers of five electric commercial trucks and two electric passenger cars will exhibit at the electric automobile show which opens Saturday at the showroom of the New York Edison Co., this city. In addition there will be exhibits by manufacturers of batteries, charging apparatus and accessories.

Trucks assigned space are Commercial, Lansden, Oneida, Walker and Ward. The passenger cars are Berg and Rauch & Lang. Battery makers exhibiting are Edison, Electric, General Lead and Philadelphia. Apparatus and accessories, Anderson Mfg. Co., Auto Electric Devices Corp., Allen Bradley Co., Cutler-Hammer Mfg. Co., General Electric Co. and Westinghouse Electric.

There will be no admission charge to the show and the space to exhibitors has been granted without charge.

Reorganize Watson Products

SYRACUSE, Jan. 19—Milton Delano, president of the State Bank of Canastota, N. Y., has been named receiver for the Watson Products Corp., manufacturer of Watson Motor Trucks. The appointment was made by Federal Judge George W. Ray at Norwich following a friendly equity action designed to conserve the assets of the company and is a part of a reorganization program. The new company will be known as the Watson Truck Corp. and creditors of the products corporation have signified their willingness to accept stock.

Maxwell Concurs in Suit

NEW YORK, Jan. 20—The Maxwell Motor Co. has concurred with petitions filed by the Jenks & Muirs Mfg. Co. of Detroit for an injunction restraining creditors from interfering during the pendency of a suit for the recovery of \$16,064 as well as for the establishment of claims of creditors and assets.

SHOWS INJECT LIFE INTO COAST BUYERS

San Francisco and Oakland Events Crystallize Public Interest—Outlook Improves

SAN FRANCISCO, Jan. 21—This is the show time of the year, and with business conditions throughout the State improving, as far as the automobile business is concerned and in other lines as well, the general feeling of optimism that now pervades the ranks of the motor car dealers and distributors appears to have a real foundation.

"Business is picking up," is the report from almost every source, and with three shows scheduled, each of which will help crystallize public interest in motor-car purchasing, the outlook is universally characterized as more promising than since the great buying movement of last year started falling off.

Here is the show program for northern California:

First—Pacific Coast Automotive Equipment Exposition, San Francisco Civic Auditorium, opening to-morrow.

Second—Oakland Automobile Show, Oakland Municipal Auditorium, Jan. 31 to Feb. 6 inclusive.

Third—San Francisco Automobile Show, San Francisco Civic Auditorium, Feb. 19 to Feb. 26 inclusive.

At the present moment, the Equipment Exposition is getting the big spotlight. This is the second year for this show, and a great many more lines are entered than was the case last year, although the 1920 event was a big event. As this is the only accessory show staged on anything approaching the same scale in the West, it is attracting jobbers and dealers from a wide territory.

Hart-Parr Instructs Dealers

CHARLES CITY, IOWA, Jan. 22—Hart-Parr Co. is intensifying its selling efforts through a series of dealers' conventions held at its distributors' places of business in the various distributing territories. Conventions have already been held at Atlanta, Birmingham, Ala.; Crowley, La.; Bloomington, Ill.; Winnipeg, Regina; Fargo, N. D., and Sioux City, Iowa. Conventions will be held in the other distributing territories all over the United States and Canada during January, February and early March.

Ranger Tractor Advanced

HOUSTON, TEX., Jan. 20—The selling price of the Ranger tractor-cultivator manufactured by the Southern Motor Mfg. Assn. has been advanced from \$1250 to \$1375. This price includes cultivator gangs.

Chicago Ready to Lift Show Lid

ENTHUSIASM HIGH AS OPENING NEARS

Thousands of Dealers Flock to City for Convention—Many Activities Outlined

CHICAGO, Jan. 24—Chicago is ready for the twenty-first annual automobile show which will be held from Jan. 29 to Feb. 5 and which will play as important a role in the revival of business in the automobile industry as that held at New York several weeks before. Enthusiasm is being manifested outside strictly dealer circles and beyond the confines of automobile row for local merchants, theaters, and restaurants have not escaped hearing of the effect of the New York show on conditions in that city.

Dealers will flock here just as they flocked to New York though perhaps in greater numbers for Chicago is more centrally located and more easily accessible to the Middle and Far West and Easterners, as a rule, rather like the idea of coming here. At any rate, reservations at the hotels in the city, large and small, indicate that nearly every inch of space available has been taken.

There will be plenty going on all the time from the afternoon the doors of the show at the Coliseum, First Regiment Armory and the New Drake Hotel, where the salon will be held, are thrown open. The truth of the matter is that business in connection with the show will start the preceding night, Jan. 28, with a dinner given at the New Drake by the Chicago Automobile Trade Association.

Graham and Kroh to Speak

Distributor members of the association have invited their Chicago sub-dealers and also their dealers from the Chicago territory together with salesmen and factory executives. George M. Graham, vice-president of the Pierce-Arrow Motor Car Co., and A. R. Kroh, who has become known in automotive circles not only through his previous active participation but through his country-wide talks on the motorization of the farm, will be principal speakers. Louis A. Peil, president of the association, will be toastmaster and there will be a prominent New York banker to discuss the financial end of the industry.

From Jan. 31 to Feb. 1 the fourth annual convention of the National Automobile Dealers Association will be held at the Hotel La Salle, the third annual trade frolic to be held in connection with it.

On Feb. 1 the annual dinner and election of officers of the Old Timers Club will be held in the Florentine room of

WHAT WILL BE GOING ON DURING CHICAGO SHOW

Friday, Jan. 28.

6:30 p. m. Dinner of Chicago Automobile Trade Association at New Drake Hotel.

Saturday, Jan. 29.

10:00 a. m. Directors meeting of the National Automobile Dealers Association, Hotel La Salle.

2:00 p. m. Opening of Twenty-first Annual Automobile Show.

Monday Jan. 31.

10:00 a. m. Opening of annual convention of N. A. D. A. at La Salle.
Opening of convention of tire dealers at Morrison Hotel.

6:30 p. m. Trade frolic of N. A. D. A.

Tuesday, Feb. 1.

11:00 a. m. Annual meeting of Motor Truck Manufacturers Association at Congress Hotel.

6:30 p. m. Organization of Old Timers Club at Congress.

Wednesday, Feb. 2.

Directors meeting of the National Automobile Chamber of Commerce at the Congress.

Annual dinner of the Society of Automotive Engineers at the Morrison.

Meeting of the Chicago Truck and Tractor Association at the Congress.

Opening of meeting of the Automotive Electric Service Association at the La Salle.

the Congress Hotel. This organization, composed exclusively of veterans in the automobile industry was initiated at the New York show a year ago by one of the old timers. The organization will be perfected at the meeting next month. The nominating committee has selected for president, Albert Champion, president of the Champion Ignition Co. of Flint.

Show week, Jan. 31, to be precise, will see the inauguration of a national tire dealers and vulcanizers association which will bring together all the individual tire dealers organizations throughout the country. The meeting will be held in the Morrison Hotel under the auspices of the Chicago Tire Dealers Association, and will continue over Feb. 1 and 2 and Feb. 3, if necessary.

N. A. C. C. and S. A. E. to Meet

The directors of the National Automobile Chamber of Commerce will hold a meeting on Feb. 2 and on the same evening the annual dinner of the Society of Automotive Engineers will be held at the Morrison.

On Feb. 1 at the Congress the Motor Truck Manufacturers Association will hold their annual meeting and on the following day at the Morrison will be held a meeting and dinner of the Chicago Truck and Tractor Association.

For three days, Feb. 2 to 4, the Automotive Electric Service Association will meet at the La Salle.

CLEVELAND EXHIBIT GETS FLYING START

CLEVELAND, Jan. 23—Saturday's attendance in spite of rain was 20 per cent above the opening last year and a Sunday crowd which exceeded all Sunday records, gave the Cleveland Automobile Show a flying start. The management and the dealers were frankly surprised at the outpouring with the admission raised from 50 to 75 cents, and accepted it as an indication that volume buying is about to return.

The show opened in a heavy down-pour which only partly cleared away in the evening, but people came just the same. Actual paid admissions at the gate were 2076 as compared with 1954 last year, and the grand total of attendance, including complimentary and reduced price tickets sold to dealers for distribution was 6000 as against 5000 in 1920. Sunday was clear and cold and the crowds thronged the aisles until 11 P. M., numbering about 50 per cent above that of Sunday last year.

There were a number of sales Saturday. Then the big rally this noon, attended by dealers from all over Ohio, put additional inspiration into the trade to make this one of the best shows of this city of successful dealer expositions. All of the Cleveland made cars are prominent among the exhibitors.

PHILADELPHIA SHOW STIRS CAR INTEREST

Several Sales Reported on Opening Days and Promis- ing Prospects Lined Up

PHILADELPHIA, Jan. 20—Black-finished enclosed cars, cars with metal disk wheels, cars of 6-cylinders and numerous stripped chassis showing internal improvements, are impressions received on entering the Commercial Museum to view the twentieth annual show under the auspices of the Philadelphia Automobile Trade Association.

There are more dealer inquiries from surrounding cities and small towns than ever before, and although this is but the third day of the show, several sales have been recorded and many promising prospects listed. There is more enthusiasm than at the previous show, and this, together with the fact that it is the costliest ever staged in the Quaker City—the exhibits exceed the \$2,000,000 mark—is taken as the measure of the dealers' assurance of unprecedentedly large business.

Instead of a program with advertisements, this year the show has only a pocket folder listing exhibitors and showing a diagram of the exhibits. More than 300 cars are on the floor.

A truck show probably will be held during the latter part of February or the first part of March. Several truck dealers are holding private "shows."

Louisiana Codifies Roads

BATON ROUGE, LA., Jan. 21—Governor John M. Parker of Louisiana has named a commission consisting of one man from each Congressional district in the State to co-ordinate and

codify the two measures for a State-wide system of improved highways, which are to be presented to the constitutional convention in March. This highway system project would have gone through at the June-July session of the State Legislature if there had been only one bill instead of two, and to obviate any such difficulty at the constitutional convention, the governor is having both bills, with the aid and consent of their proponents, written into one measure, which is to become part of the organic law.

TRUCKS GIVEN SPACE AT TRACTOR EXHIBIT

COLUMBUS, Jan. 21—After considering the question for some time, the executive committee in charge of the National Tractor Show, which will be held here Feb. 7 to 12 inclusive, has decided to admit trucks to the exhibits. This action was taken at a meeting of the executive committee in Chicago recently when the Columbus committee made such a recommendation.

The space to be allotted to truck manufacturers will be plotted in the near future and contracts for space will be closed. This space is somewhat limited, although very desirable, and is located in the Coliseum, which is the central building used for the show. There will be space for from 30 to 50 trucks.

John T. Grantham Dies

ATLANTA, Jan. 20—John T. Grantham, president of the John T. Grantham Motor Co., Apperson, Columbia and Chevrolet dealers in Savannah, died recently at his home following an illness of more than a year. He had been in the automobile business for several years and was well known throughout the Southeast. He was aged fifty-two.

TIGHT MONEY DELAYS CEDAR RAPIDS SHOW

Grain Slumps Make Credit Sit- uation Acute—Expect Trade Revival in March

CEDAR RAPIDS, IOWA, Jan. 21—The condition of Iowa's money market, agreed by bankers to have been more critical during the last sixty days than in several years, has been responsible for the delaying of the annual motor show of the Cedar Rapids Motor Trades Bureau until the latest possible date. At a recent meeting of the local association, it was agreed to make no effort to have the exhibition until after March 1, and to wait until the middle of the month if satisfactory arrangements for dates can be made.

It is likely that the show will be held during the week of March 14, following the Des Moines show.

A loosening up of the State's credit situation is anticipated about March 1 by bankers and automobile men. Farm money is expected in about that time, and this will be likely to prove a stimulus to purchasing among rural prospective buyers. Slumps in grain, which hit farmers holding for anticipated increases, were the chief causes of the tight money situation.

If the show committee can find another place large enough to house this year's show, the City Auditorium will be tossed to the discard, but prospects for a change are not bright. The main floor will be given over to the display of passenger cars, with some overflow in the basement. The basement, however, will be devoted chiefly to the display of trucks, tractors and accessories. Arrangements have been placed in the hands of L. M. Millsap, W. H. Morris and Frank Whitney.

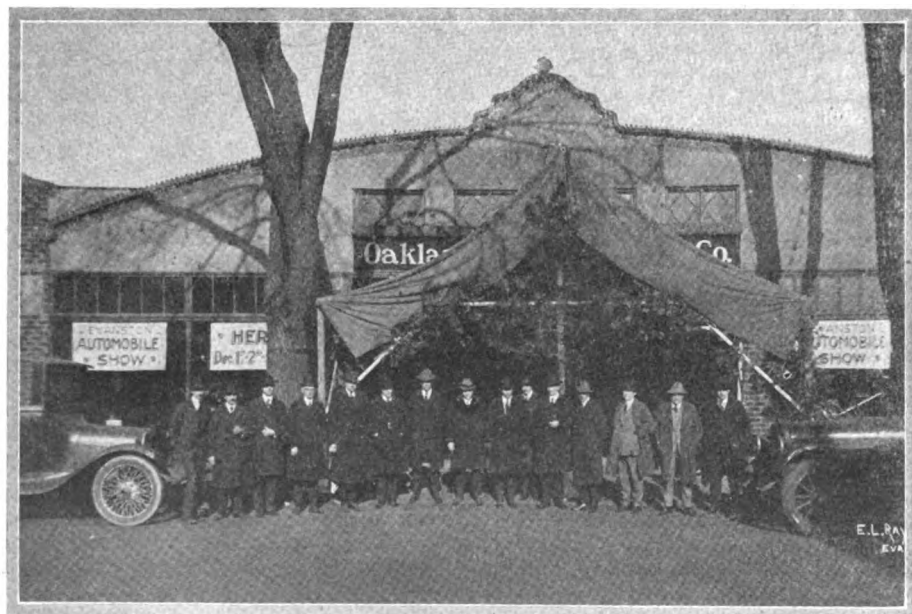
Interlocking Receiver Named

AKRON, Jan. 21—Elihu Harpham, prominent Akron real estate operator, has taken charge of the affairs of the Interlocking Cord Tire Co., following his appointment as receiver by Judge W. I. Ahern in Common Pleas Court, on petition of several stockholders and minor officers of the company. They charge mismanagement and alleged fraudulent work upon the part of certain officials of the company. This petition is signed by shareholders, including E. E. Ammons, vice-president of the company; Walter G. Scott Herman, Gustave J. A. Gibson and W. Dorn.

Ford to Improve Railroad

DETROIT, Jan. 21—Improvements costing between \$10,000,000 and \$15,000,000 on the Detroit, Toledo and Ironton Railroad are contemplated within the next year by the Ford interests, which acquired control several months ago. Preliminary work costing approximately \$1,000,000 has been completed. The plans call for the rehabilitation of the equipment.

Every Evanston Dealer Got Into the Show



Every dealer in Evanston, Ill., is a member of the association and every one of them participated in the Evanston show held in December. The show was planned to sell the idea that Evanston is the proper place for Evanstonians to buy motor cars. From the reports the job was well done

DURANT TO LOCATE FIRST UNIT IN FLINT

*Car to Be Along Chevrolet
Lines Is Belief—Organiza-
tion Now Forming*

NEW YORK, Jan. 20—The first unit of Durant Motors, Inc., incorporated late last week by William C. Durant, former president of the General Motors Corp., will be located in Flint, Mich. This decision was communicated to-day to the Flint Chamber of Commerce and was in compliance with earnest appeals to Durant to return to the city where he gained his first fame and which he is credited with having "put on the map."

News that Durant was going back into the automobile manufacturing field with a car of his own has created intense interest throughout the industry, but it caused a sensation in Flint, and ever since it was made his temporary offices in the Goodrich Rubber Co. building have been deluged with telegrams of congratulation and best wishes. They also have brought more substantial wishes, including an offer of a free site of 40 acres of land for a plant.

Durant has not told his plans in detail, and probably won't for a month yet, but he already is rounding up an organization. The first man to join him was F. W. Hohensee, who resigned as a vice-president, director and member of the finance committee of General Motors the same day last week that Durant retired as a member of the finance committee and chairman of the executive committee. Hohensee has been known as one of the most capable men in General Motors, where he has been general manager of production for the Chevrolet company.

The second man to go with Durant was A. T. Stuart, chief engineer of the Chevrolet company. He has had much to do with the development of that car. The fact that these two Chevrolet executives have gone with Durant adds significance to his announcement that Durant Motors would produce a 4-cylinder car which would sell for less than \$1,000. It is understood, however, that the new car will include several features Durant long has had in the back of his head.

Factory Operation by August

It is probable it will be in a little higher price class than the Chevrolet, but will lend itself to quantity production. When it will be placed on the market has not been determined, but it is expected the company will be in operation by Aug. 1. In addition to the Flint plant, another factory will be located in the East, and it is possible the company will have a separate unit for the manufacture of engines and other parts.

No further statement has been made as to the financing details or the names of Durant's associates. The three incorporators, besides himself, were office employees. When the company is finally organized the names of three of four men of country-wide reputation will appear on the directorate.

Next Week

in Motor World

- 1—Report of the Chicago show by Motor World editors in attendance.
- 2—The Cleveland show, covered by a Motor World staff man.
- 3—The Baltimore show, first to be held by the dealers' association of the Southern city.
- 4—Does Your State Need a Better Vehicle Law? With an analysis of the Proposed Uniform Vehicle Act sponsored by the great associations of the industry.
- 5—Another story on The Dealer's Contract.

STUDEBAKER OUTPUT TOTALS 52,000 IN 1920

SOUTH BEND, IND., Jan. 21—The Studebaker Corp. turned out 52,000 motor cars in the year ending Dec. 31. Its best previous production was 38,300 cars in 1919. The company reports that the total of unsold cars on hand is only 1600, or about two weeks' supply. Both the South Bend and Detroit factories have resumed operations on the basis of an output of 800 cars a week equally divided between the two plants. The company will devote its efforts exclusively to the manufacture of automobiles, having disposed of its old farm wagon business to the Kentucky Wagon Co. of Louisville with the right to use the Studebaker name for two and a half years.

Nash on 40 Cars Daily

KENOSHA, WIS., Jan. 20—Former workmen to the number of 2,000 have been re-employed by the Nash Motors Co., which has been operating with a greatly reduced force. Its output is now forty cars daily and it is planned to return to normal as quickly as conditions warrant it. In peak war times the plant employed more than 5,000 men and had a daily output of nearly 250 cars.

Mobile Signs Show Lease

MOBILE, ALA., Jan. 20—Mobile is to have an annual automobile show for the next ten years at least. Guy J. Hartwell, supported by virtually all the automobile dealers of this city, has signed a ten-year lease with the Gulf Coast Fair Association, for the automobile display building at the fair grounds on Mobile Bay. The show will be held simultaneously each year with the Gulf Coast Fair.

Rockford Gets Show Building

ROCKFORD, ILL., Jan. 21—The Tarkington Motor Co. building has been secured for the first post-war automobile show of the Rockford dealers. Meetings will be held this week to determine floor space for exhibitors and fix definite date for the show tentatively scheduled for early in February.

G. M. C. NOT TO ADD TO PRESENT LINES

*No Consolidations Likely for
Present—To Stimulate Sales
in All Divisions*

NEW YORK, Jan. 20—The General Motors Corp. closed 1920 in a strong position with its inventories of unfinished materials substantially reduced, with its finances in good condition and comparatively few unsold vehicles on hand. It can be said with authority that the corporation does not contemplate any material expansion during the coming year, notwithstanding many reports now in circulation of consolidations with other companies. It is felt the company's factories now are adequate to meet the demand for some time to come and that nothing will be gained by taking on additional lines.

Efforts will be centered upon making all the various divisions as profitable as Chevrolet, Buick and Cadillac have been. There is a possibility that the company may abandon some of its activities not related to the automotive industry. It is understood the directors are not enthusiastic about retaining the big new Durant building in Detroit, and they probably would not hesitate to sell it if an opportunity offered.

Reorganize Executive Staff

NEW YORK, Jan. 20—At a meeting of the directors of the General Motors Corp. Thursday, the resignation was accepted of W. C. Durant as a member of the finance committee and as a member and chairman of the executive committee.

The executive committee was designated as follows: P. S. Du Pont, chairman; J. J. Raskob, J. A. Haskell and A. P. Sloan, Jr.

The resignation was accepted of F. W. Hohensee as a director, vice-president and member of the executive committee.

F. D. Brown was elected a member of the finance committee.

C. F. Kettering was elected a vice-president. A. H. Swayne was elected a director and vice-president.

ROLLS-ROYCE ORDERS NOW \$1,500,000 AHEAD

SPRINGFIELD, MASS., Jan. 20—A dinner was given by the officers of Rolls-Royce of America, Inc., to the foremen and heads of departments to celebrate the completion of the first chassis built in the plant here under English supervision. The chassis now on test is American built, even to the radiator. Preliminary operations were begun at the American works on July 12 and have been almost constantly under way since that time. The company now has on hand in this country more than \$1,500,000 worth of unfilled orders. The dinner was attended by about fifty of the English experts in charge of production. L. J. Belnap, the president, was toastmaster of the occasion.

CAR SEIZURE UPHOLD BY SUPREME COURT

Dealers' Liens Invalidated by Illegal Use of Vehicle— May Extend Decision

WASHINGTON, Jan. 21—Revision of automobile dealers' terms of sale may follow a decision handed down by the Supreme Court to-day affirming the legal conclusions of the lower courts that the statutes authorize the forfeiture of motor vehicles seized for the illegal transportation of intoxicating liquors. The Court held that it was the proper exercise of Federal power given, even though the J. W. Goldsmith, Jr., Grant Co., which sold the automobile, had no knowledge of its improper or illegal use.

The case was brought to the highest tribunal on a writ of error to the United States District Court for the Northern District of Georgia. The plaintiff claimed an interest in an automobile seized by the Government while transporting "bootleg." The car had been sold under a retention title contract. It was contended that the Revised Statutes should be construed to authorize the forfeiture only in the interest of the offending party and not the title of the innocent owner. The Government declared that a long line of decisions established that forfeitures were authorized by statutes and include the interest of an owner who was not a participant in the illegal acts which affected the forfeiture.

The Government claimed that there was nothing unreasonable in requiring the owner of an automobile or other vehicle to see to it that his property is not used in the execution of frauds upon the Government. In this connection, the Court agreed with the Attorney General that "to do so does not deprive him of his right to lend or lease same, but puts upon him merely the obligation of seeing to it, on pain of confiscation, that the party to whom the same is intrusted does not use it for a fraudulent purpose." The Government suggested that it is possible to secure protection by making an arrangement to that effect.

Will Affect Dealer Suits

The Court's decision will undoubtedly affect litigation instituted by automobile agencies to recover from the sale of the confiscated cars on which payment had not been completed.

Justice McKenna, who read the opinion of the court, went back to the Mosaic statutes for initial justification of the Government's contention, quoting from the ancient tablets that "if an ox gore a man that he die, the ox shall be stoned and his flesh not eaten."

Counsel for Goldsmith had contended that affirmation of the decision of the lower court might mean that a Pullman sleeper might be seized if a passenger carried a quart of liquor on board, or

an ocean liner forfeited to the Government if, unknown to those in charge, a case of liquor was transported in the hold.

"Whether these indicated possibilities under the law are justified we are not called upon to consider," Justice McKenna said. "And we also reserve opinion as to whether the section can be extended to property stolen or otherwise taken from an owner without his consent."

HARTFORD TO SUE ON STARTER PATENT

NEW YORK, Jan. 20—The possibility of a long list of suits against manufacturers of motor vehicles equipped with self-starters, and self-starter manufacturers for infringement of patent rights, has been opened with the award of four patents for self-starting systems to E. V. Hartford, president of E. V. Hartford, Inc., manufacturers of equipment, with a plant in Jersey City. A test suit will be started against a manufacturer of a standard automobile by Dunn, Goodlett, Massie & Scott, counsel for the patentee. Both the name of the manufacturer and the place of suit were withheld for the time being.

In the belief of counsel, every two-unit system now on the market and in use in automobiles is an infringement on the Hartford patents in some particular. Notices of the Hartford award have been mailed to 230 car manufacturers throughout the country, as well as to every firm making self-starting systems.

According to counsel, the four Hartford patents, as granted by the United States Patent Office on Jan. 4 this year, cover sixty-seven claims. In almost every instance these are on two-unit systems, though one or two claims are on one-unit. Applications for the patents were filed by Hartford at different times between the years 1910 and 1915. Reasons for delay in granting the patents are ascribed by counsel to the constant litigation instituted by others who had worked out similar apparatus.

Duty Motors Makes Truck

CHICAGO, Jan. 20—The Duty Motor Corp., which has been incorporated for \$500,000 under the laws of the State of Illinois, is manufacturing a 2-ton capacity truck which sells for \$1,490 and is contemplating the erection of a large factory in the early spring in Greenville, Ill., to increase production. The following have been elected officers of the corporation: president, W. H. Ruther; vice-president, W. J. Gubser; secretary-treasurer, J. P. Snowden; and sales manager, Paul Harnetiaux.

Allen Reduces Open Models

COLUMBUS, Jan. 19—A price reduction of \$200 on open models was announced to-day by the Allen Motor Co., the price now being \$1395. More elaborate models are to be featured, giving a choice of four colors, three styles of wheels and cord tires.

CREDIT MEN MOVE TO AID TIME SALES

Series of Letters to Be Issued on Finer Points of Handling Business

NEW YORK, Jan. 20—A series of letters advising dealers on the finer points of making automobile and truck sales on credit, has been devised by the Automobile Financing Credit Men's Association, Inc., which is operating with a permanent secretary from headquarters in New York. To date three letters have been sent out and others will follow, all being intended to help dealers improve the general standing of their credit risks, to their own benefit and that of the acceptance companies financing time sales.

The first letter tells the dealers—clients of the companies making up the association—about the formation of the organization and its objects. It then goes on to discuss the adequacy of "down payments," declaring that in all cases these should be large enough so that the repossessed value of the car or truck would not be less than the balance due on it. The letter particularly cautions against sales in which the earnings of the vehicle are to be relied upon to meet installment payments, pointing out that illness, accident or loss may at any time cause delinquency or default, with the dealer as the loser.

The second letter urges careful investigation by the dealer to determine the financial responsibility of prospective time purchasers, and the third elaborates on the same idea.

The association has twenty-five members in the New York territory, and seventeen, some of them branches of New York and vicinity houses, in Chicago and vicinity. It has a protective feature for its members in the exchange of information regarding accounts, intended, among other things, to prevent loans by two companies with one vehicle as security, a situation which develops occasionally when a dealer has patronized one company to finance the wholesale purchase and another to carry the retail sale of the same car or cars.

94 Duplications in December

Obviously, the second lien was worthless, and the acceptance corporation without means of enforcing its claim in case of default. During December, for instance, ninety-four such duplications, involving \$18,881, were reported. The larger work of the association, it is stated, is to assist the dealer in improving his credit risks.

The association includes several of the larger acceptance corporations, two of which are controlled by automobile interests, and a number of the medium and small sized companies. In 1920, the members financed \$256,597,891 of automobile business, which officials estimate was about one-fourth of the aggregate of time payment financing.

PROPOSED FUEL TAX ROUSES CALIFORNIANS

Tractor Users Suffer by Road Maintenance Plan — Sug- gest Tax on Tires

SACRAMENTO, CAL., Jan. 21—With a deficit of some \$15,000,000 in the probable revenues of 1921 under the budget for this year, the State Legislature has turned to the automobile industry to raise a large part of this sum. At a joint hearing of the Senate Finance Committee and the Assembly Ways and Means Committee, at which the motor car industry and the gas and oil interests were represented, it was pretty definitely intimated that a tax of one cent a gallon would be laid on gasoline sales, with a proportionate tax on distillate and fuel oil.

The California Auto Trades Association and the Motor Car Dealers Association oppose the plan on the ground that already the automobile owners of the State are paying \$5,000,000 a year in licenses for this very purpose, and they maintain that no such sum as \$5,000,000 a year is spent for maintenance purposes. This is in addition to county and city taxes, which reach a sum of like or greater proportions.

The most bitter opposition to the plan will come from farming interests of the State. Tractors are used in great numbers in California, in fact, they are rapidly replacing horses on farms in all sections. A tax on motor fuel would hit them hard, and the Legislature committeemen and the oil companies admit there is no way of differentiating.

Senator Walter Eden has suggested another plan of tax, that of levying on tires. This, he says, would get the motorists in exact proportion as they used the highways.

Revere Declared Solvent

INDIANAPOLIS, Jan. 24—A finding of solvency in the bankruptcy proceedings instituted against the Revere Motor Car Corp. of Logansport, three weeks ago, has been made in Federal Court by Harry C. Sheridan of Frankfort, special master. The decision has been expected ever since the hearing last week, when Sheridan indicated he was convinced of the solvency of the concern. The finding points out that expert accountants had testified that the assets of the company on Nov. 30, 1920, were \$1,157,328.59 and liabilities only \$354,659.90.

Chicago Opposes Truck Show

CHICAGO, Jan. 21—The Chicago Automobile Trade Association is not countenancing efforts which are being made by individual promoters to hold a truck show in this city as long as the National Automobile Chamber of Commerce, of which most of the manufacturers are members, withholds its stamp of approval. It feels that such an exhibit, as long as the manufacturers are unwilling

GARAGE ASSOCIATION TO FIGHT BLUE LAWS

PHILADELPHIA, Jan. 20—The Philadelphia Garage Association is planning to conduct a campaign before the State Legislature this winter against the so-called "blue" laws, as especially inimical to the interests of the owners of public garages. At the monthly meeting John R. Fox, secretary of the association, outlined conditions to the membership. Other speakers were "Al" Ladner and "Parson" Davis of the Smile and Don't Worry Club. There were six vaudeville turns on the program. More than 100 members attended.

The March meeting will take the form of a supper and dance at Mosebach's Hall.

to sponsor it, would place an additional burden on the truck dealer and distributor without the returns coming in to justify it. This attitude was taken before the New York Highway Transportation Show was held and the results of that exposition are not such, it is believed, as to warrant an altered view being taken now. It is doubtful if any truck dealer or distributor in the city will join such a movement in view of the position taken by the association.

NEW LONDON FINDS REPAIR WORK HEAVY

NEW LONDON, CONN., Jan. 22—Local automotive dealers anticipate a satisfactory spring business despite the industrial depression of the past few months, with the truck leading in volume of sales over passenger cars. Dealers report a fair number of orders for spring delivery, and with business back on a stable basis they look for a normal year.

Aside from the selling end of the business, automotive men report an abundance of repair work, plenty of skilled help available and little need of cutting wages of their employees. Practically every garage man reports enough work ahead to keep his men busy for the next two months. Some of the dealers are inclined to interpret the large amount of repair work as an indication that not a few automobile owners plan to make their present cars do for another season instead of buying new and trading in the old machine.

To Revise M. A. M. A. Show Rules

NEW YORK, Jan. 20—Show rules of the Motor and Accessory Manufacturers Association are to be revised so as to permit a more general showing of accessories, if the Advertising Managers' Council of the association is successful in its plans. A resolution drafted by the council for a committee to confer with General Manager Heminway relative to revisions is soon to be acted upon by the executive committee.

LABOR STILL SCANT, FARMERS MOTORIZE

Southeast Dealers Prepare for Brisk Business in Tractors and Implements

ATLANTA, Jan. 21—In spite of the fact that the recent drop in the prices of agricultural products has proven a genuine hardship to the farmers of the South, that cotton is still selling at about half the actual cost of production and that the outlook for the coming year from an agricultural standpoint is not exceptionally bright, tractor dealers and distributors are confident that sales will be equally as large in the South during the present year as they were in 1920, when all previous records were surpassed.

Most of the large manufacturers maintain branch offices and warehouses in Atlanta, covering the Southeast from this point, and they are all preparing for a large volume of business during the next six months.

While agricultural labor conditions have improved somewhat in the South the past three or four months, a labor shortage is still existent, and most of the farmers are virtually compelled to turn to power farming to overcome this trouble. Agricultural production will not be as large in the South this year as in 1920, but tractor dealers and distributors express the belief that more power farming machinery will be used this year than ever before.

Reports received within the past few days from all dealers of the Cleveland Tractor Co., which has a Southeastern branch in Atlanta, are to the effect that the tractor outlook is exceptionally bright and that they believe 1921 sales will exceed those of 1920.

VIM REPORTED BOUGHT BY STANDARD STEEL CAR

PHILADELPHIA, Jan. 22 — Vim Motor Truck Co. has been reorganized and taken over by responsible financial interests. No announcement has been made as to the details of the transaction, but it is understood the company has been purchased by the Standard Steel Car Co., which has plants at Butler and New Castle, Pa., and Hammond, Ind.

The Vim company resulted from a reorganization in 1915 of the Touraine company, which produced the Vim delivery cars. The company has devoted itself to the manufacture of commercial vehicles.

Wizard Advertising Disputed

NEW YORK, Jan. 20—Advertising of the Wizard Automobile Co., Charlotte, N. C., is branded as a flagrant offense against truth by the national vigilance committee of the Associated Advertising Clubs of the World in a special bulletin issued here. The bulletin asserts that the company claimed enormous profits before a single car was produced.

NASH BEGINS YEAR IN STRONG POSITION

Has Cash Reserves of \$12,409,378 — Production to Conform With Demand

NEW YORK, Jan. 20—A dividend of \$10 a share on the common stock, payable Feb. 1, has been declared by the Nash Motors Co. A regular quarterly dividend of \$1.75 on the preferred also has been declared payable on the same date.

The annual report of the Nash Motors Co. for the year ending Nov. 30, shows a net income after Federal taxes of \$7,007,471 equivalent after preferred dividends of \$122.79 earned on the 54,500 shares of common stock of no par value. This compares with net income of \$5,089,035, or \$95.06 on the 50,000 shares outstanding in the preceding year. The profit and loss surplus at the end of the year was \$12,531,837, an increase of \$5,820,471 in twelve months. With \$12,409,378 in cash, the company is in a tremendously strong position.

In a letter to stockholders, President C. W. Nash says that sales for the year amounted to more than \$57,000,000, or nearly \$10,000,000 more than the preceding year. The company produced 37,263 passenger cars and 3848 trucks. Its exports, not including those to Canada and Mexico, totaled 2700 cars and trucks. In his letter, Nash said:

"The first units of the new plant at Milwaukee are now completed and operations started. The new four-cylinder car being turned out there is meeting with a fine reception and it is expected that it will prove a great asset to the Nash Motors line.

"We have put \$1,573,083 into the Milwaukee plant for land, buildings, machinery and equipment, besides \$1,280,709 for working capital. We also expended during the year \$1,051,445 in the enlargement of the Kenosha six-cylinder passenger car and truck plant. We have practically no uncompleted construction on hand at present.

Prepared for Sales Slump

"For the first nine months of the fiscal year we were unable to keep up with the demand for our car, but beginning Oct. 1 we experienced a sharp drop, which caused us to shut down our plant for a number of weeks and for the balance of the period up to the present time to operate on a reduced schedule. We were expecting this reduction and when it came had on hand less than half a day's production.

"We intend to continue a conservative production policy because we regard our distributing machinery as the most vital part of our business, and we also fully realize that the bankers who are co-operating with our dealers are just as much a component part of our organization as the dealers themselves.

"We are looking forward to at least a moderately successful year."

DECEMBER ONE SHORT OF HIGH FOR YEAR

SAN FRANCISCO, Jan. 20—Al G. Faulkner, Marmon distributor for California, Nevada and the Hawaiian Islands, reports that his organization sold more Marmons during the month of December, despite the hue and cry of "business is bad," than during any previous month of the entire year, except May, which month marked the crest of the buying wave of early 1920—and December came within one car of equalling even May. Faulkner's wonderful record, borne out by the official figures available, is causing widespread comment in the trade.

SAN FRANCISCO OPENS BIG EQUIPMENT SHOW

SAN FRANCISCO, Jan. 22—The second annual Pacific Coast Automotive Equipment Exposition opened yesterday with a big attendance of dealers from all parts of the State and a fair showing of general public. Every niche of the great civic auditorium was taken up with displays of automotive specialties, accessories and devices of all descriptions with extensive heavy machinery, tool and miscellaneous mechanical exhibits scattered throughout the building.

Several hundred more exhibitors are participating in this year's show than in the initial one last year, and the keen attention already, evidenced by dealers indicates that they see the superiorities of the "Show" way of doing their buying.

Decorative and entertainment features are taken care of to the satisfaction and delight of show visitors and exhibitors alike. The equipment is off to a flying start.

WILLS SAINTE CLAIRE READY TO ENTER MARKET

MARYSVILLE, MICH., Jan. 22—The first cars from the production line of C. H. Wills & Co. will be completed within a few days. This marks the start of production of the Wills product, which has been expected by the trade and general public for nearly a year. The car is to be known as the Wills Sainte Claire and it is a product which is of unusual interest because of the broad plans of the company which manufactures it. In selecting the site for the factory, it was necessary to practically build a new community before the plant was even started.

C. R. Lester Leaves Packard

DETROIT, Jan. 24—C. R. Lester has resigned as general service manager of the Packard Motor Car Co., taking effect Jan. 17. Lester has occupied this important position for a number of years and has been largely instrumental in building up the system and personnel of the Packard service organization. He is one of the pioneers in the automobile business.

HEAVY LOSSES CAUSE McGRAW SHAKE-UP

**Bankers Take Over Affairs of
Company and Select Majority of Directors**

CLEVELAND, Jan. 21—The Maynard H. Murch Co., investment bankers of this city, has taken control of the McGraw Tire & Rubber Co. in order to protect the holders of preferred stock of the company. This action was taken pursuant to a right reserved when the Murch company bought a \$2,500,000 preferred stock issue of the company in August, 1919.

At the offices of Mr. Murch it was stated that the rubber company suffered severe losses from two sources, as follows: First, in operation through the reduction of tire prices that followed a slump in buying; second, through the shrinkage in value in the readjustment period of quantities of fabric and crude rubber, which were bought in too large quantities on a peak market.

The Murch company on taking hold of the company directed that the inventory be written down to the present market prices for all assets on hand, and that all losses through contracts that the rubber company had with firms throughout the country be charged off. In making these reductions the McGraw company took a loss of \$2,500,000. Most of this loss came about through the marking down to present prices the fabric and crude rubber that had been bought when the market was soaring.

The Murch company, as guarantors of the preferred stock, has not been satisfied with the management of the company for some time, and it took the action indicated in order not only to protect the preferred stockholders, but to prevent affairs getting into a worse condition. Eight of the eleven directors of the company now are men selected by the Murch company.

Rambler Tire Receiver Named

NEW YORK, Jan. 21—Federal Judge Hand has appointed receivers for the Rambler Tire & Rubber Co. in a suit brought by a creditor with a claim for \$3,500. The company was organized under Delaware laws in 1920 to manufacture tires and rubber goods. Its liabilities are \$28,872 and its assets \$60,690. It is asserted that the company is solvent, but that it has no working capital and is unable to meet current obligations.

Ford Association Started

BAD AXE, MICH., Jan. 20—Ford automobile dealers from Huron, Tuscola and part of Sanilac counties have organized the Thumb Association of Ford dealers. H. B. Harder of Pigeon is president, C. A. Klein of Caro is secretary, and G. A. Tindale of Cass City, treasurer. It is the plan to eventually organize the entire State of Michigan.

CHANGES In the Trade

E. C. Ulrich has been placed in charge of the Wilmington, Del., Franklin agency.

Clucker & Hixson Co., New York, will represent the Western Mfg. Co. during 1921.

L. G. Peed, formerly territorial man in the East for the Willys-Overland Co., has been made manager of the Toledo branch.

Henry Kissel, formerly service manager for the Splittorf Electric Co., is now in charge of the repair department of the American Bosch Magneto Co.

Ernest N. Culver has been appointed assistant sales manager of the Willys-Overland Co., being promoted from sales manager of the Southern division.

Commerce Delaware Truck Co. has been formed at Wilmington and has taken over the Delaware sales of Commerce trucks. Thomas Wright heads the company.

Black & Decker Mfg. Co. has opened a branch office and service station in San Francisco to cover the entire Pacific Coast territory. M. A. Johnson will be manager.

Horst & Wilkinson, recently formed in Davenport, Iowa, will distribute Hood and Goodyear tires in that section, in addition to carrying a full line of automobile equipment.

Kirkland-Cravens Motors, Inc., Kansas City, has been appointed Haynes distributor in the territory comprising Kansas, Oklahoma, western Missouri and northern Texas.

Warren W. Homan, Penns Grove, N. J., has been appointed distributor for the Traffic truck in Salem County, that State. Homan has been representing trucks in that locality for the past six years.

A. W. Swain, who has been retail sales manager for the Overland Harper Co. of Philadelphia since its beginning, has resigned to take charge of sales for the Liberty Mutual Insurance Co. of Boston.

E. A. Taylor, production engineer for the Pierce-Arrow Motor Car Co., has become general manager for the Liberty Motor Car Co. It is expected that his advent will result in several changes in the Liberty personnel.

H. M. Daniels has been appointed manager of the New York branch of the Four Wheel Drive Co. Daniels has spent a great part of his time in the Orient, where he has established FWD agencies in China, Japan, India, as well as in many other countries.

J. E. Dilworth Co., Memphis, Tenn., has been appointed representative of the Roller-Smith Co. in the western part of Tennessee, eastern part of Arkansas and northern part of Mississippi. E. M. Greeson is in charge of the electrical department of the Dilworth company.

U. & J. Carburetor Co., Chicago, have opened a branch in Memphis for the distribution of carburetors through the tri-state territory of Arkansas, Mississippi and Tennessee. R. E. King is manager and R. V. Rinard, formerly with the Allen Motor Co., handles the service end.

Mid-West Motors Corp., Davenport, Iowa, which has operated an automobile agency and garage for many years, has increased its capital stock from \$300,000 to \$500,000 and will be known as the General Jobbing Co. F. E. Kaufman is president and Charles Siebke secretary of the company.

J. W. Currie, Edward Currie and J. S. Currie, of Atlanta, have organized and incorporated Currie Brothers Co., with \$250,000 capital, to establish a business in Atlanta as distributors of automobiles, trucks and tractors. No announcement has been made as to the lines to be handled by the new concern.

David Rosenbach, formerly president of the Motor Equipment Co., which recently discontinued business, has been appointed general field secretary of the Automotive Equipment Association. He was a jobber for five years, sales manager for the Rayfield carburetor for many years, and for four years was president of the Overland Sales Co.

S. E. Albertson has retired from the Hamper-Albertson Co. of Milwaukee, Wisconsin distributor of the Liberty, to take charge of the sales department of the Smith-Koerner Co. of Milwaukee, distributor of the Ogren in Wisconsin and upper Michigan. Before going to Milwaukee, Albertson was head of the Albertson Motor Co. of Flint, Mich., Hudson and Detroit electric dealer.

W. J. Foss, formerly of the Foss-Hughes Co., Philadelphia, and more recently with the Pierce-Arrow organization in Buffalo, has obtained the distributorship of the new Wills-Lee car that soon will be produced in Marysville, Mich. Foss' territory will include Pennsylvania, New Jersey, Delaware, Maryland and the District of Columbia. He has secured quarters for the sales and service on Market Street, near Twenty-first.

M. L. O'BRIEN HEADS MILWAUKEE TIRE MEN

MILWAUKEE, Jan. 24—At the annual meeting of the Milwaukee Tire Dealers Association, M. L. O'Brien was elected president; G. J. Kellner, first vice-president; R. A. Smith, second vice-president; E. H. Berge, secretary, and Lawrence J. Engle, treasurer. The association has a membership of fifty of the representative tire dealers of Milwaukee. It was organized two years ago as the outgrowth of a voluntary organization formed during the war period for the purpose of effecting economies and promoting efficiency during the emergency. It is considered one of the most influential local organizations in the United States and its success has been responsible to a considerable extent for the movement which will culminate in the organization of a national association at the Chicago National Show late this month.

Sales Managers Form Club

SAN ANTONIO, Jan. 20—Automotive sales managers of this city have formed the Automotive Sales Managers Club for the purpose of arousing a spirit of co-operation in the trade and to encourage any movement for the good of the automotive industry. Active membership is limited to sales managers of companies which are members of the San Antonio Trades Association, and honorary membership is extended to service managers and salesmen.

Officers of the club are R. H. Croxton, president; H. L. Krough, vice-president; George B. Cole, secretary-treasurer. There will be ten directors, four of whom, I. D. McKee, S. I. Brown, Richard Drake, and Hicks Woods, have been elected, the others to be elected at the next regular meeting.

SHOW WEEK BRINGS MILWAUKEE CHANGES

Nash and Oakland Open New Buildings—Distributors Sign New Lines

MILWAUKEE, Jan. 24—Annual winter show week in Milwaukee was a more notable event than any of the thirteen which preceded it, in respect to the concrete evidences of the development of the industry, especially the distribution and dealer angles. Special features of the week were the dedication of the new sales and service buildings of the Nash Sales Co. and the Wisconsin Oakland Co., each representing investments ranging from \$175,000 to \$200,000. At the same time the Wisconsin State Rubber Co. formally opened its new three-story tire and rubber goods sales, office and warehouse building. Numerous other concerns employed the week of the show to concentrate attention upon new buildings or new sales and service facilities provided in recent months to meet the increasing demands to come during the coming active motoring season and future years.

A number of changes of note in dealerships and distributor franchises also were made public during the week.

The E. W. Clark Motor Co., Milwaukee and Fond du Lac, distributor of the Maxwell and Chalmers in Wisconsin, was appointed distributor of the Dorris of St. Louis in the same territory, including Upper Michigan.

The Koehler-Rahn Auto Co. took over the National franchise for Wisconsin and Upper Michigan, continuing as distributor of the Elgin in the same jurisdiction.

The Coerper Motor Co. added the Samson truck, built by General Motors at the big plant of the Samson Tractor Co. in Janesville.

The Daggett-Yewdale Motor Co. was named representative of the Grant in Milwaukee and vicinity.

The Downer Garage & Sales Co., distributor of the Winther line of Kenosha, Wis., announced its connection as distributor of the H. C. S. in the Wisconsin territory.

SEATTLE ASSOCIATION NAMES NEW OFFICERS

SEATTLE, Jan. 24—Optimism—a determination to "make business good"—was the dominant note at the annual meeting of the Seattle Motor Car Dealers Association. Seattle dealers expressed themselves as confident that there will be a satisfactory movement of cars here this spring and summer if vigorous merchandising campaigns are prosecuted.

George Gunn, Jr., was elected president of the association for the ensuing year. Other officers elected were: W. K. Chilcott, vice-president; V. C. Koree, secretary-treasurer; Harry L. Austin, H. P. Grant, C. H. Shields, George Gunn, Jr., and Max Olson, trustees.

COMING EVENTS

SHOWS

Chicago	Jan. 29-Feb. 4.	National Passenger Car Show, Coliseum, National Automobile Chamber of Commerce.
York, Pa.	Jan. 29-Feb. 6.	Annual Automobile Show, York County Automobile Dealers' Ass'n, Overland Garage, A. H. Geesey, Mgr.
Allentown, Pa.	Jan. 29-Feb. 12.	Annual Automobile Show, Lehigh Automotive Trades Ass'n, Association Bldg.
Hudson, N. Y.	Jan. 31-Feb. 5.	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
London, Ont.	Jan. 31-Feb. 5.	National Motor Show of Western Ontario, Automotive Retailers' Ass'n, L. C. Kirby, Mgr.
Erie, Pa.	Jan. 31-Feb. 5.	Annual Automobile Show, Automotive Association of Erie, General Electric Bldg. John Roth.
Cumberland, Md.	Jan. 31-Feb. 5.	Annual Automobile Show, Cumberland Automobile Dealers' Ass'n, State Armory.
Oakland, Cal.	Jan. 31-Feb. 6.	Annual Automobile Show, Alameda County Automotive Trades Ass'n, Oakland Civic Auditorium.
Scranton, Pa.	Jan. 31-Feb. 10.	Passenger Car Show, Scranton Motor Trades Ass'n, Armory, H. B. Andrews, Mgr.
Madison, Wis.	February	Annual Automobile Show, Automobile Dealers' Division, Madison Ass'n of Commerce, Ordinance Bldg., Don E. Mowry, Mgr.
Chattanooga, Tenn.	February	Annual Automobile Show, Chattanooga Automotive Trade Ass'n, Sunday Tabernacle.
Roanoke, Va.	February	Annual Automobile Show, Roanoke Automobile Dealers' Ass'n, Auditorium, W. M. Shickle.
Rockford, Ill.	February	Annual Automobile Show, Rockford Automobile Trades Ass'n, Shrine Temple.
Logan, Utah	Feb. 1-3.	Annual Automobile Show, Cache Valley Automobile and Accessory Ass'n, N. W. Merkley, Pres.
Tampa, Fla.	Feb. 3-12.	Annual Automobile Show, in connection with South Florida Fair, Tampa Automobile Dealers' Ass'n, E. V. Plane, Mgr.
Minneapolis	Feb. 5-12.	Northwestern Automobile and Industrial Exposition, Northwest Terminal Bldg.
Reading, Pa.	Feb. 7-11.	Annual Automobile Show, Reading Automobile Dealers' Ass'n, Auditorium.
Newburgh, N. Y.	Feb. 7-12.	Annual Automobile Show, Armory, J. J. Callahan, Mgr.
Columbus	Feb. 7-12.	National Tractor Show, Columbus Tractor and Implement Club, Ohio State Fair Grounds.
Rochester, N. Y.	Feb. 7-12.	Automobile Show, Rochester Automotive Trades Ass'n, Exposition Park.
Bridgeport, Conn.	Feb. 7-12.	Annual Automobile Show, Bridgeport Automotive Ass'n, Inc., L. J. McCracken.
Tulsa, Okla.	Feb. 7-12.	Annual Automobile Show, Tulsa Automobile Dealers Ass'n.
Yonkers, N. Y.	Feb. 7-12.	Annual Automobile Show, State Armory, W. H. Partlan, director.
Schenectady, N. Y.	Feb. 7-12.	Annual Automobile Show, J. J. Callahan, Mgr.
St. Louis	Feb. 7-12.	Annual Automobile Show, St. Louis Automobile Manufacturers' & Dealers' Ass'n, Robert E. Lee, Mgr.
Bucyrus, Ohio	Feb. 9-12.	Annual Automobile Show, Crawford County Automotive Trade Ass'n, C. J. Carmean, Sec'y.
Kansas City	Feb. 12-19.	Annual Automobile Show, Kansas City Motor Car Dealers' Ass'n, Ed Peake, Mgr.
Hartford, Conn.	Feb. 12-19.	Annual Automobile Show, Hartford Automobile Dealers' Ass'n, Armory, Arthur Fifoot, Mgr.
Winnipeg	Feb. 14-19.	Automotive Equipment Show, W. L. Williams, Secretary of Executive Committee.
Worcester, Mass.	Feb. 14-19.	Annual Automobile Show, Worcester Automotive Ass'n, Casino.
Trenton, N. J.	Feb. 16-19.	Annual Automobile Show, Trenton Automobile Trade Ass'n, Armory.
Streator, Ill.	Feb. 17-19.	Annual Automobile Show, Streator Automobile Trade Ass'n, P. J. Hunt, Mgr.
Ottawa, Ill.	Feb. 17-19.	Annual Automobile Show, Conde Motor Supply Co., Armory.
San Bernardino, Cal.	Feb. 18-23.	Annual Automobile Show in conjunction with National Orange Show, San Bernardino Automotive Trades Ass'n, Wichita Springs Park, Fred M. Renfro, Mgr.
San Francisco	Feb. 19-26.	Fifth Annual Pacific Coast Show, Exposition Auditorium, George Wahlgren, Mgr.
Albany, N. Y.	Feb. 19-26.	Annual Automobile Show, Albany Automobile Dealers' Ass'n, Armory, J. B. Wood, Mgr.
Paterson, N. J.	Feb. 21-26.	Annual Automobile Show, Armory.
Deadwood, S. D.	Feb. 21-26.	Annual Automobile Show, Auditorium.
Salt Lake City	Feb. 21-26.	Annual Automobile Show, Intermountain Automotive Trade Ass'n, W. D. Rishel, Mgr.
Louisville	Feb. 21-26.	Annual Automobile Show, Louisville Automobile Dealers' Ass'n, Armory.
Grand Rapids, Mich.	Feb. 21-26.	Automobile Business Association, Furniture Exhibition Bldg., M. D. Elgin, Mgr.
Elmira, N. Y.	Feb. 21-26.	Annual Automobile Show, Elmira Automobile Club, State Armory, H. S. Bryan, Mgr.
Manchester, N. H.	Feb. 21-26.	Annual Automobile Show, New Hampshire Automobile Dealers' Ass'n, Armory, C. E. Norris, Mgr.
Amarillo, Texas	Feb. 22-24.	Annual Automobile Show, in conjunction with Buyers and Sellers Convention, Amarillo Automotive Ass'n.
Binghamton, N. Y.	Feb. 22-26.	Annual Automobile Show, Binghamton Dealers' Ass'n, Armory, R. B. Moffitt, chmn.
Poughkeepsie, N. Y.	Feb. 22-26.	Annual Automobile Show, State Armory, W. H. Partlan, Mgr.
Galesburg, Ill.	Feb. 22-26.	Annual Automobile Show, Galesburg Automotive Dealers' Ass'n, Armory.
Saginaw, Mich.	Feb. 22-26.	Annual Automobile Show, Saginaw Automobile Dealers' Ass'n, R. B. Bishop, Sec'y.

Newton, Kan. Feb. 23-26. Annual Automobile Show, Harvey County Motor Trade Ass'n, Auditorium, Henry Marks, Mgr.

Clinton, Iowa Feb. 23-26. Annual Automobile Show, Clinton County Automobile Dealers' Ass'n, Coliseum, H. C. Finch, Sec'y.

Malone, N. Y. Feb. 23-26. Annual Automobile Show.

Buffalo Feb. 26-Mar. 5. Annual Automobile Show, Buffalo Automobile Dealers' Ass'n, 74th Regiment Armory, C. C. Proctor, Mgr.

Duluth, Minn. Feb. 28-Mar. 5. Annual Automobile Show, Duluth Automobile Trade Ass'n, Armory.

Muskegon, Mich. Feb. 28-Mar. 5. Annual Automobile Show, Muskegon Automobile Business Ass'n, New Armory, J. C. Fowler, Mgr.

Portland, Me. Feb. 28-Mar. 5. Annual Automobile Show, Portland Automobile Dealers' Ass'n, Exposition Bldg., H. B. Chandler, Mgr.

Wichita, Kan. March 1-5. Annual Automobile Show, Wichita Motor Trade Ass'n, Exposition Bldg., Henry B. Marks, Mgr.

Wilmington, Del. March 1-5. Annual Automobile Show, Wilmington Automobile Trade Ass'n, Auditorium.

Quincy, Ill. March 1-5. Annual Automobile Show, State Armory, Quincy Automotive Trade Ass'n.

Des Moines March 2-10. Annual Automobile Show, Coliseum, C. G. Van Vleet, Mgr.

Brooklyn March 5-12. Annual Automobile Show, Brooklyn Motor Vehicle Dealers' Ass'n, 23rd Regiment Armory, George C. Lewis, Chmn.

New Haven, Conn. March 5-12. Annual Automobile Show, New Haven Automotive Dealers' Ass'n, Arena.

Atlanta March 5-12. Annual Automobile Show, Atlanta Automobile Ass'n, Auditorium, Virgil Shepard, Mgr.

Pittsburgh March 5-12. Annual Automobile Show, Automotive Ass'n, Inc., Motor Square Garden, J. J. Bell, Mgr.

Syracuse, N. Y. March 7-12. Annual Automobile Show, Syracuse Automobile Dealers' Ass'n, Armory, H. H. Smith, Mgr.

Springfield, Mass. March 7-12. Annual Automobile Show, Springfield Automotive Ass'n, Auditorium, Harry W. Stacy, Mgr.

Indianapolis March 7-12. Annual Automobile Show, Indianapolis Automotive Trade Ass'n, State Fair Grounds, John Orman, Mgr.

Pendleton, Ore. March 10-12. Annual Automobile Show, Pendleton Automotive Ass'n, Happy Carmon, J. B. Knight, Mgr.

Newark, N. J. March 12-19. Annual Automobile Show, New Jersey Automobile Exhibition Co., 1st Regiment Armory.

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity		
Alfa-Chalm.	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	G-O	14-28	\$1485	4	Wauk.	4-4 1/2 x 5 1/2	Ker.	3	Pioneer	18-36		4	Own	4-5 1/2 x 6	Ker.	4		
Alfa-Chalm.	10-18		3	Own	2-5 1/2 x 7	G.K.	2-3	Grain Belt	18-36	2500	4	Wauk.	4-4 1/2 x 5 1/2	GorK	4	Pioneer	30-60		4	Own	4-7 x 8	G.	10		
Alfa-Chalm.	18-30		4	Own	4-1 1/2 x 6 1/2	G.K.	3-4	Gray	18-36		3	Wauk.	4-4 1/2 x 5 1/2	G.K.	4	Pioneer	15-30	\$1985	4	Buda	4-4 1/2 x 6	G.K.	4		
Allwork	12-25		4	Own	4-4 1/2 x 6	GorK	3	Ground Hog		2800	4		4-4 x 6	Ker.	4	Port Huron	12-25	1700	4	Chief	4-4 1/2 x 6	G.K.	4		
Andrews-KinD	14-28		4	Own	4-5 x 6 1/2	G.K.	3	Gt. Western St	20-30	1950	4	Beav.	4 1/2 x 6	K.	4	Post	12-20		4	Wauk.	4-4 1/2 x 5 1/2	GorK	2		
Appleton	15-36		4	Clim.	4-5 x 6 1/2	GorK	4	Hart-Parr					2-5 1/2 x 6 1/2	K,D	3	Prairie Dog	9-18		3	Wauk.	4-3 1/2 x 5 1/2	Gas.	2		
Appleton	12-20	\$1500	4	Buda	4-1 1/2 x 5 1/2	G.K.	2-3	Hart-Parr	20	1195	4	Own	2-6 1/2 x 7	K,D	3	Prairie Dog	15-30		4	Wauk.	4-4 1/2 x 6 1/2	Gas.	3		
Antman-T.	15-30		4	Clim.	4-5 x 6 1/2	G.K.	4	Heider	9-16		4	Wauk.	4-1 1/2 x 5 1/2	G,K	2	Ranger	18-36	1875	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1		
Antman-T.	22-45		4	Own	4-5 1/2 x 8	G.K.	6	Heider	C	12-20		4	Wauk.	4-1 1/2 x 5 1/2	G,K	3	Reed	15-30	2155	4	Dom	4-4 1/2 x 6	K	3-4	
Antman-T.	30-60		4	Own	4-7 x 8	G.K.D	8	Heider	Cult	6-10		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Reliable	10-20	985	4	Own	2-6 x 7	G.K.D	2	
Autocut-B-3	12-24		4	Here's	4-4 x 5 1/2	G.K.	2-3	Hicks	15-30	1750	4		4-4 1/2 x 6	KorG.	4	Reo	12-25	1600	4	Wauk.	4-4 1/2 x 6 1/2	G.K.D	3		
Avery-SR-Cal.	5-10		4	Own	4-3 x 4	G.K.		Huber	12-25	1385	4	Wauk.	4-4 1/2 x 5 1/2	G,K,D	3	Samson			4	Own	4-4 x 5	G.K	2		
Avery-Cal			3	Own	6-3 x 4	G.K.		Illinois	C	18-36	2375	4	Clim.	4-5 x 6 1/2	G,K	4	Sandusky	J	10-20	1250	4	Own	4-1 1/2 x 5 1/2	G,K,D	2
Avery-Plan			3	Own	6-3 x 4	G.K.		Imperial	40	40-70	5000	4	Own	4-7 1/2 x 9	G,K,D	10	Sandusky	E	15-35	1750	4	Own	4-5 x 6 1/2	G,K,D	4
Avery-C			4	Own	4-3 x 4	G.K.	2	Indiana	5-10		2	LeR.	4-3 1/2 x 4	Gas.	1	Shawnee	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.			
Avery	8-16		4	Own	2-5 1/2 x 6	G,K,D	2-3	International	8-16		4	Own	4-4 1/2 x 5	G,K,D	2	Shawnee	9-18		2	Gray	4-3 1/2 x 5	Gas.			
Avery	12-25		4	Own	2-6 1/2 x 7	G,K,D	3-4	International	15-30		4	Own	4-5 1/2 x 8	G,K,D	4	Shelby	C	9-18	4	Wauk.	4-3 1/2 x 5 1/2	Gas.	2		
Avery	14-28		4	Own	4-4 1/2 x 7	G,K,D	4-5	J-T	N	16-30		2	Chief	4-4 1/2 x 6	G,K	3-4	Shelby	D	15-30	4	Beav.	4-4 1/2 x 6	G.K	3	
Avery	18-36		4	Own	4-5 1/2 x 8	G,K,D	5-6	Kardel Util.	12-25	1650	4	Midw.	4-4 1/2 x 5 1/2	GorK	3	Short Turn	20-40	1600	3	Clim.	4-5 x 6 1/2	K,G	3		
Avery	25-50		4	Own	4-6 1/2 x 7	G,K,D	5-6	Kech-Gon	15-30	1650	4	Own	2-7 1/2 x 8	G,K	3	Square T	18-35		3	Own	4-4 x 5	Gas.	3		
Bates All St.	45-65		4	Own	4-4 1/2 x 6	Ker.	3	Kumb	F	16-32		4	Clim.	4-5 x 6 1/2	G.K	3	Steady Pull	12-24	1485	4	Own	4-4 x 5	Gas.	3	
Bates-S.M.	15-25		4	Own	4-4 1/2 x 6	G,K,D	3	LaCrosse	M	7-12	950	4	Own	2-4 x 6	G,K		Stearns	2	15-30	2500	4	Own	4-4 1/2 x 6 1/2	G.K	3-4
Beech	8-16		1	Own	14-3 1/2 x 4	G,K	2-3	LaCrosse	G	12-24	1250	4	Own	2-6 x 8	Ker.	3	Stearns	4E	18-36		4	Beav.	4-4 1/2 x 6	G,K	4
Beechman	2-4	840	2	Own	1-3 1/2 x 4 1/2	Gas.	1/2	LaCrosse	M	7-12	950	4	Own	2-6 x 8	Ker.	3	Stearns	20-40		4	Beav.	4-4 1/2 x 6	G,K	4	
Best	30-60	3250	2	Own	4-4 1/2 x 6 1/2	G,K,D	4	LaCrosse	G	12-24	1250	4	Own	2-6 x 8	Ker.	3	Tiegs	15-27	2625		4	Wauk.	2-6 1/2 x 8	G,K,D	2-4
Best	35-60	8750	2	Own	4-0 1/2 x 5 1/2	G,K,D	8-1	LaCrosse	M	15-25		4	Beav.	4-4 1/2 x 6	G,K,D	3	Titan	10-20		4	Wauk.	4-4 1/2 x 6	G,K	3	
Boring			3	Wauk.	4-0 1/2 x 5 1/2	G,K,D	8-1	LaCrosse	M	15-25		4	Beav.	4-4 1/2 x 6	G,K,D	3	Titan	2-6	885		4	Wauk.	1-4 x 4	G,K	
Buff	12-24	1200	3	Toro.	2-5 1/2 x 7	G,K	3	LaCrosse	M	15-25		4	Beav.	4-4 1/2 x 6	G,K,D	3-4	Tiegs	30-45	4000	4	Wauk.	4-4 1/2 x 6 1/2	Gas.	4-6	
Burns-Oil	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3	LaCrosse	M	15-25		4	Beav.	4-4 1/2 x 6	G,K,D	3-4	Tiegs	6-12	850	4	LeR.	4-3 1/2 x 4 1/2	Gas.	2	
Capital	10-18	1500	2	Own	4-4 x 6	Gas.	3-3	LaCrosse	M	16-32		4	Clim.	4-5 x 6 1/2	G,K	4	Tiegs	6-12	815	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	
Casa	15-30	1200	4	Own	4-3 1/2 x 6	G,K,D	2-3	LaCrosse	M	18-36		4	Clim.	4-5 x 7 1/2	G,K,D	4-6	Tiegs	6-12	815	4	LeR.	4-3 1/2 x 4 1/2	Gas.	2	
Casa	15-27	1800	4	Own	4-4 x 6	G,K,D	3-4	LaCrosse	M	20-30	2530	4	Buda	4-4 1/2 x 6	G,K	3	Tiegs	6-12	815	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	
Casa	22-40	3100	4	Own	4-5 1/2 x 6 1/2	G,K,D	4-5	LaCrosse	M	18-32	2475	4	Clim.	4-5 x 6 1/2	G,K	4	Tiegs	6-12	815	4	LeR.	4-3 1/2 x 4 1/2	Gas.	2	
Caterpillar	25x40		2	Own	4-4 1/2 x 6	Gas.	4	LaCrosse	M	4	850	4	Ford	4-3 1/2 x 4	K	4	Tiegs	14-25		4	Buda	4-4 1/2 x 6 1/2	G,K	3	
Caterpillar	40-60		2	Own	4-6 1/2 x 7	Gas.	6	LaCrosse	M	16-22	2200	4	Ford	4-4 1/2 x 5	K	4	Tiegs	12-20		4	Own	4-4 1/2 x 6	G,K	3	
Chase	12-25	1785	3	Buda	4-4 1/2 x 5 1/2	G,K,D	2-3	LaCrosse	M	26-35	3300	4	Own	4-5 1/2 x 6	K	12	Tiegs	20-35		4	Own	4-5 1/2 x 6 1/2	G,K	5	
Chitrac	12-20	1495	2	Own	4-4 x 5 1/2	G,K,D	2-3	LaCrosse	M	85-150		2	Own	4-5 1/2 x 6 1/2	Gas.	12	Tiegs	40-65		4	Own	4-7 1/2 x 9	G,K	5	
Dahota	15-27	1750	3	Dom.	4-4 1/2 x 6	G,K	3	Macultivator		1 1/2	225	2		1-2 1/2 x 3 1/2	Gas.	3	Uncle Sam	10-18	1485	4	Wid	4-4 1/2 x 6	Ker.	2	
Dart-B.J.	15-30	2000	4	Buda	4-4 1/2 x 6	Gas.	3-4	Magnet		14-28		4	Wauk.	4-4 1/2 x 6 1/2	Gas.	3	Uncle Sam	20-30	2300	4	Own	4-4 1/2 x 6	Ker.	3	
Dell	20	2480	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Market		2-4 1/2		4	Wauk.	1-4 x 4	Gas.	3	Universal	1-4	475	2	Own	1-3 1/2 x 5	G	1	
Do-It-All		596						Master Jr.		4-8		4	LeR.	4-4 x 4	Gas.	1	Universal	1 1/2 x 3 1/2	390	2	Own	1-3 1/2 x 5 1/2	Gas.	1 1/2	
Engle	12-22	1390	4	Own	2-7 x 8	Ker.	3	Merry Gar.		2	230	2	Evin	1-2 1/2 x 3 1/2	Gas.	1	Valley	12-24	1750	4	Own	4-4 1/2 x 5 1/2	G,K,D	3	
Engle	16-30	1850	4	Own	2-8 x 8	Ker.	3	Minne. All-P.		12-25	1325	2	Own	4-4 1/2 x 7	GorK	1-2	Valley	9-18	1385	4	Gray	4-3 1/2 x 5	Gas.	2	
E-S	12-20		4	Own	4-4 1/2 x 5	Ker.	3	Mohawk		8-16	785	2	Own	4-4 1/2 x 7	GorK	1-2	Valley	15-30	1750	4	Wauk.	4-4 1/2 x 5 1/2	Gas.	3	
E-S	12-20		4	Own	4-4 1/2 x 5	Ker.	3	Moline Univ.		9-18	1325	2	Own	4-4 1/2 x 7	GorK	1-2	Valley	10-20	1295		Wauk.	4-3 1/2 x 5 1/2	G,K	2-2	
E-S	16-32		4	Own	4-6 1/2 x 7	Ker.	4	Moline Orch.		9-18	1375	2	Own	4-3 1/2 x 5	Gas.	2-3	Walls			4	Own	4-4 1/2 x 5 1/2	G,K,D	3	
E-S-Reeves	40-65		4	Own	4-7 1/2 x 9	Ker.	8-10	Monarch		30-18	3250	2	Beav	4-4 1/2 x 6	Ker.	4	Waller	15-25		4	Own	2-6 1/2 x 7	G,K,D	3	
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G,K	4	Motex		15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3	Waller	28-53	5250	2	Wisc.	4-5 1/2 x 7	G,D	6	
Fagel	9-12	1525	4	Lys.	4-3 1/2 x 5	G,K,D	2	New Britain. 1		3-6	450		Own	2-3 1/2 x 4	Gas.		Waller	12-22		4	Wisc.	4-4 x 4	Ker.	2-3	
Farm Horse	18-30	1685	4	Clim.	4-5 x 6 1/2	G,K	3-4	New Britain. 2		3-6	500		Own	2-3 1/2 x 4	Gas.		Waller	16-30		4	Wisc.	4-4 1/2 x 6	Ker.	3-4	
Fencher	15-25		3	Buda	4-4 1/2 x 6	G,K,D	3-4	Nelson Spec.		10-20		4	Wauk.	4-3 1/2 x 5 1/2	G,K	2	Waller	12-25	1650	4	Wisc.	4-4 x 5 1/2	G,K	2-3	
Fencher	18-35		4	Own	4-4 x 8	G,K.	4-5	Nelson Senior		20-40	2675	5	Wauk.	4-5 x 6 1/2	G,K	4	Waller	9-18	1175	4	Wisc.	2-5 1/2 x 6 1/2	Gas.	2	
Fencher	25-50		4	Own	4-7 x 8	G,K	6-7	Nelson Senior		20-40	2675	5	Wauk.	4-5 x 6 1/2	G,K	4	Waller	15-30	2500	4	Wisc.	4-4 1/2 x 6	Ker.	3-4	
Fitch	20-35		4	Clim	4-5 1/2 x 6	G,K,D	3-4	Oil Pull		12-20		4	Own	2-6 x 8	K,D	3	Waller	16-30		4	Wisc.	4-4 1/2 x 6	Ker.	3-4	
Flour City	20-35		4	Own	4-6 1/2 x 7	Ker.	4-6	Oil Pull		16-30		4	Own	2-7 x 8 1/2	K,D	4	Waller	12-25		4	Wisc.	4-4 x 5 1/2	G,K	2-3	
Flour City	30-50		4	Own	4-6 1/2 x 7	Ker.	8-1	Oil Pull		20-40		4	Own	2-8 x 10	K,D	5-6	Waller	9-18	1175	4	Wisc.	2-5 1/2 x 6 1/2	Gas.	2	
Flour City	40-70		4	Own	4-7 1/2 x 9	Ker.	8-10	Oil Pull																	

Specifications of Current Models of Passenger Cars

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....	H-S	6-3 1/4 x 5	115	32x4	\$2260	\$2260	....	....	....	Madison.....	Ow.	6-3 1/4 x 5	115	33x4	\$1570	\$1570	....	....	....
Allen.....	Series 43	6-3 1/4 x 5	110	32x4	11395	1395	....	....	\$2395	Maibohm.....	B	6-3 1/4 x 5 1/2	116	32x4	1575	1575	....	\$2395	\$2395
American.....	C	6-3 1/4 x 5	127	32x4	2395	2395	\$2475	\$3295	3495	Marmion.....	34	6-3 1/4 x 5 1/2	136	32x4 1/2	5300	5300	\$5000	6150	6600
Anderson.....	30	6-3 1/4 x 4 1/2	120	33x4	2195	2145	2195	3200	3200	Maxwell.....	25	6-3 1/4 x 5 1/2	109	30x3 1/2	995	995	....	1595	1695
Apperson.....	820-S	6-3 1/4 x 5	130	34x4 1/2	....	13500	3500	4500	4500	McFarlan.....	147	6-4 1/2 x 6	140	35x5	6300	6300	6300	7500	7500
Apperson.....	Anniversary	6-3 1/4 x 5	130	34x4 1/2	....	4250	4250	6000	6000	Mercer.....	Series 5	6-3 1/4 x 5 1/2	132	32x4 1/2	3095	3095	*3950	5150	5650
Auburn.....	639 H-K	6-3 1/4 x 4 1/2	120	32x4	1745	1095	....	2795	2795	Meteor.....	K&R	4-4 1/2 x 6	129	32x4 1/2	5500	5500	....	....	....
										Metz.....	M6	6-3 1/4 x 5	120	32x4	1995	1995	....	2795	2895
Beggs.....	20T	6-3 1/4 x 4 1/2	120	33x4	....	2000	....	....	....	Mitchell.....	F-40	6-3 1/4 x 5	120	33x4	1750	1750	....	2800	2900
Bell.....	H-S	4-3 1/2 x 5	114	31x4	1495	1495	....	....	....	Monitor.....	S-3	6-3 1/4 x 4 1/2	121	33x4	2475	2475	....	....	3475
Biddle.....	BI	4-3 1/2 x 5 1/2	121	32x4	3750	3750	3950	....	....	Monroe.....	S-9	6-3 1/4 x 4 1/2	115	32x3 1/2	1440	1440	....	....	....
Bour-Davis.....	21	6-3 1/4 x 5 1/4	126	33x4 1/2	2585	2535	2585	....	....	Moon.....	6-48	6-3 1/4 x 4 1/2	122	32x4	2085	1985	....	2985	2985
Bradley.....	Four	....	....	....	....	....	....	....	....	Moon.....	6-68	6-3 1/2 x 5 1/2	125	32x4 1/2	2585	....	2495	3485	3485
Brewster.....	4-4	x 5 1/2	125	34x4 1/2	....	19000	....	....	10500	Murray.....	Ow.	8-3 1/4 x 5	128	34x4 1/2	....	3500	....	....	....
Briscoe.....	4-34	Ow.	109	31x4	1285	1285	....	1885	1885										
Brook.....	S-21	Ow.	67	28x3	395	....	....	....	....	Nash.....	681-6	6-3 1/4 x 5	121	33x4	1695	1695	1850	2650	2895
Buick.....	21-44-5-6-7	Ow.	118	33x4 1/2	1795	1795	....	2585	2895	Nash.....	682	6-3 1/4 x 5	127	34x4 1/2	....	....	....	....	....
Buick.....	21-48-9-50	Ow.	124	34x4 1/2	....	....	2065	2985	3295	Nash Four.....	Ow.	4-3 1/2 x 5	112	32x3 1/2	1395	1395	....	....	....
										National Sextet.....	BB	6-3 1/4 x 5 1/2	130	32x4 1/2	3750	3750	3750	4900	4950
Cadillac.....	59	Ow.	125	34x4 1/2	3990	3990	4090	4600	4950	Nelson.....	D	6-3 1/4 x 5 1/2	104	32x4	....	1700	....	....	....
Case.....	V	6-3 1/4 x 5 1/2	126	34x4 1/2	....	....	3740	4990	....	Noma.....	IC	6-3 1/4 x 4 1/2	128	32x4 1/2	3000	3200	....	....	....
Chalmers.....	6-30	Ow.	122	33x4	1795	1755	....	2650	3400	Norwalk.....	430-KC	4-3 1/2 x 5	116	32x3 1/2	....	1385	....	....	....
Chalmers.....	630	Ow.	122	33x4 1/2	....	....	1945	....	2745										
Champion.....	C4	H-S	123	33x4	11895	1595	....	....	....	Oakland.....	34-C	6-2 1/2 x 4 1/2	115	32x4	1395	1395	....	2065	2065
Chandler.....	Ow.	6-3 1/4 x 5	123	33x4	11895	1595	....	....	....	Ogen.....	6-60	6-3 1/4 x 5 1/2	134	....	....	3750	*3900	4750	5200
Chevrolet.....	490	Ow.	102	30x3 1/2	795	820	1895	1825	1375	Oldsmobile.....	4	6-2 1/2 x 4 1/2	112	32x4	1450	1450	....	2145	2145
Chevrolet.....	490	Ow.	110	33x4	320	1345	....	2075	2075	Oldsmobile.....	37-A	6-2 1/2 x 4 1/2	112	32x4	1450	1450	....	1425	1475
Chevrolet.....	490	Ow.	110	33x4	320	1345	....	2075	2075	Overland.....	6	6-4 x 5 1/2	100	30x3 1/2	895	895	....	....	....
Cleveland.....	40	Ow.	117	33x4	1555	1550	....	2445	2445	Owen Magnetic.....	40	6-4 x 5 1/2	142	35x5	*7000	7000	7000	8000	8500
Climber Four.....	H-S	6-3 1/4 x 5	125	32x4 1/2	2750	2750	....	3250	....									
Climber Six.....	H-S	6-3 1/4 x 5	127	32x4 1/2	2750	2750	....	3250	....	Packard.....	Six	6-3 1/4 x 4 1/2	116	33x4 1/2	2795	2795	....	4150	4250
Cole.....	870	Nort	127	33x5	3250	3250	....	4450	....	Packard.....	Ow.	12-3 x 5	136	35x5	6000	6000	6000	8200	8450
Columbia.....	D-C&CS	6-3 1/4 x 4 1/2	125	32x4	1945	1795	....	2895	2895	Paige.....	6-42	6-3 1/4 x 5	119	32x4	1770	*1700	....	2595	2645
Comet.....	C-53	6-3 1/4 x 5 1/2	125	32x4	1785	1595	....	....	2465	Paige.....	6-66	6-3 1/4 x 5	131	33x4 1/2	....	....	2795	3675	3750
Commonwealth.....	H-S	6-3 1/4 x 5	117	32x4	1785	1595	....	....	2465	Pan.....	A	6-3 1/4 x 5	108	33x4	....	....	....	....	....
Crawford.....	21-5-40	6-3 1/4 x 5 1/2	122 1/2	32x4	3000	3000	3000	4500	4500	Pan American.....	H-S	6-3 1/4 x 5	121	33x4	2450	2450	....	....	3600
Crow-Elkhart.....	LS-55	Lye.	117	32x3 1/2	11295	1295	....	2195	....	Paterson.....	650	6-3 1/4 x 4 1/2	120	33x4	....	....	1895	1925	2895
Crow-Elkhart.....	HS-55	H-S	117	32x4	11545	1545	....	....	2395	Peatless.....	56	6-3 1/4 x 5	125	34x4 1/2	....	3200	3230	3920	4140
Cunningham.....	V-3	6-3 1/4 x 5	132	35x5	....	....	....	....	....	Piedmont.....	4-30	6-3 1/4 x 5	116	32x3 1/2	....	1485	....	....	....
										Piedmont.....	6-40	6-3 1/4 x 4 1/2	142	35x5	*7900	7900	8000	9000	....
Daniels.....	D	6-3 1/4 x 5 1/2	132	34x4 1/2	4850	4850	6250	6950	....	Pierce-Arrow.....	48	6-4 1/2 x 5 1/2	134	34x4 1/2	7500	7500	7500	8500	9000
Davis.....	51-57	6-3 1/4 x 4 1/2	120	33x4	2125	2085	12250	3085	3085	Pierce-Arrow.....	38	6-4 x 5 1/2	120	32x4	1945	1895	....	2850	2900
Dispatch.....	G	4-3 1/2 x 5	120	34x4	1290	1350	1525	1575	....	Porter.....	45	6-3 1/4 x 5	142	35x5	6750	....	....	....	....
Dixie Flyer.....	H-S-70	H-S	112	32x4	1595	1595	....	2570	2570	Premier.....	6-D	6-3 1/4 x 5 1/2	126 1/2	32x4 1/2	4600	4600	4600	5600	6100
Dodge Brothers.....	Ow.	4-3 1/4 x 5 1/2	114	32x3 1/2	1235	1285	....	1900	2150	Premocor.....	6-40 A	6-3 1/4 x 4 1/2	117	32x3 1/2	....	1295	....	....	....
Dorris.....	6-80	Ow.	132	33x5	....	4785	4785	5800	6600	Premocor.....	4-80	6-3 1/4 x 4 1/2	117	32x4 1/2	....	3865	....	....	....
Dort.....	17-A	D-Ly	105 1/2	31x4	1215	1215	....	1865	1905										
Dupont.....	A	6-3 1/4 x 5 1/2	124	32x4 1/2	3400	3400	....	....	4900	Ranger.....	A-20	6-3 1/4 x 5	116	32x4	....	1850	....	....	....
										R & V Knight.....	R	6-3 1/4 x 5	115	32x4	....	2150	....	....	2700
Elcar.....	D.H.K.G.	Lye.	117	33x4	....	1495	1495	2095	2195	R & V Knight.....	J	6-3 1/4 x 4 1/2	127	32x4 1/2	3550	3550	3550	4400	....
Elcar.....	D.H.K.G.	Cont.	117	33x4	....	1795	1795	2395	2495	Reo.....	T	6-3 1/4 x 5	120	33x4	1850	1850	....	2700	2750
Elgin.....	K	6-3 1/4 x 4 1/2	118	33x4	1895	1775	....	2685	2685	Reo.....	C	6-3 1/4 x 5	131	32x4 1/2	4850	4650	4650	....	6500
Essex.....	A	6-3 1/4 x 5	108 1/2	32x4	1595	1595	....	2100	2450	Roamer.....	C-6-54	6-3 1/4 x 5 1/2	128	32x4 1/2	....	....	....	....	....
										Roamer.....	D-4-75	6-3 1/4 x 5 1/2	128	32x4 1/2	....	....	....	4500	5000
Ferris.....	Cont.	6-3 1/4 x 5 1/2	130	32x4 1/2	....	*3350	....	....	4875	Saxon.....	125	6-3 1/4 x 5	112	32x4	....	1895	....	2795	2795
Ford.....	T	6-3 1/4 x 4	100	30x3 1/2	395	440	....	745	795	Sayers.....	Six-42	6-3 1/4 x 4 1/2	118	33x4	2595	2195	....	....	3295
Franklin.....	9-B	6-3 1/4 x 4	115	32x4	2400	2600	2500	....	3600	Scripts Booth.....	Six-B	6-2 1/2 x 4 1/2	115	32x4	1545	1545	....	2215	2295
Friend.....	Ow.	4-3 1/4 x 4 1/2	112	32x3 1/2	1585	1585	....	2485	2585	Seneca.....	L	6-3 1/4 x 4 1/2	108	30x3 1/2	1185	1185	....	....	....
										Severin.....	Six	6-3 1/4 x 5 1/2	122	32x4	....	2400	....	....	....
Grant.....	HX	6-3 1/4 x 4 1/2	116	32x4	1550	1550	....	2450	2450	Sheridan.....	4	6-3 1/4 x 5 1/2	116	33x4	1685	1685	....	....	....
Gardner.....	Lye.	4-3 1/4 x 5	112	32x3 1/2	1195	1195	....	2145	....	Sheridan.....	8	6-3 1/4 x 4 1/2	132	33x5	....	....	....	....	....
										Singer.....	Series 20	6-2 1/2 x 5	138	33x5	6500	6500	6500	8600	....
Halladay.....	M	6-3 1/4 x 5	122	....	....	....	....	3250	....	Skellon.....	35	6-3 1/4 x 5	112	32x3 1/2	1245	1245	....	....	....
Handley-Knight.....	Knight	4-4 1/2 x 4 1/2	125	32x4 1/2	....	2285	....	....	....	Standard.....	I	6-3 1/4 x 5	127	34x4 1/2	....	....	....	....	....
Hanson.....	54	6-3 1/4 x 4 1/2	121	32x4	2365	2365	2465	2885	2885	Stanley Steamer.....	Ow.	2-4 x 5	130	34x4 1/2	....	3950	3950	5650	5775
Hatfield.....	H-S	4-3 1/4 x 5	115	32x4	1695	1695	....	....	....	Stanwood Six.....	SKL4	6-3 1/4 x 5 1/2	125	34x4 1/2	2550	2450	2675	3400	3700
Haynes.....	47	6-3 1/4 x 5	132	34x4 1/2	2685	2935	2935	3650	4250	Stearns.....	80	6-3 1/4 x 4 1/2	122	33x4 1/2	2400	2400	2400	3400	3400
Haynes.....	48	12-2 1/2 x 5	132	34x4 1/2	....	13635	3635	4350	4950	Stevens Duryea.....	Ow.	6-4 1/2 x 5 1/2	138	35x5	18000	....	8000	9500	9500
Huffman.....	R	6-3 1/4 x 4 1/2	120	32x4	1995	1995	....	2975	....	Studebaker.....	EJ-40	6-3 1/4 x 5	112</						

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	
				Front	Rear						Front	Rear						Front	Rear		
A. & B. 3T	3	.....	5 1/2 x 4 1/2	48x31 1/2	48x31 1/2	I	Corbitt, B	2 1/2	\$3650	4 1/2 x 5 1/2	36x4	36x4	W	Gramm, 10	1	\$1495	3 1/2 x 5	33x5 1/2	33x5 1/2	B
A. & B. 5T	5	.....	5 1/2 x 4 1/2	48x31 1/2	48x31 1/2	I	Corbitt, A	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x10	W	Gramm, 15	1 1/2	2050	3 3/4 x 5	36x3 1/2	36x5	W
Acason, R	1 1/2	.....	3 3/4 x 5 1/2	36x3 1/2	36x6	W	Corbitt, AA	5	5500	4 1/2 x 6	36x6	40x6	W	Gramm, 65	1 1/2	2725	3 3/4 x 5	36x3 1/2	36x5	W
Acason, RB	1 1/2	.....	3 3/4 x 5 1/2	36x3 1/2	36x6	W	Couple Gear, HC	3 1/2	6100	5 1/2 x 5 1/2	.x4	.x4	W	Gramm, 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Acason, H	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W	Couple Gear, AC	5	6700	5 1/2 x 7	.x5	.x5	W	Gramm, 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4	W
Acason, L	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Couple Gear, LD	7	7450	5 1/2 x 7	.x5	.x5	W	Gramm, 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Acason, M	5	.....	5 x 6 1/2	36x6	40x6 1/2	W	Dart, S	1 1/2	2250	3 3/4 x 5 1/2	34x3 1/2	34x6	W	Gramm, 50	5	5275	4 1/2 x 6	36x6	40x6 1/2	W
Ace, C	1 1/2	\$2750	3 3/4 x 5 1/2	34x3 1/2	34x5	W	Dart, M	3	3000	4 1/2 x 5 1/2	36x4	36x7	W	Grant, 17	1 1/2	2675	3 3/4 x 5	35x5 1/2	38x7 1/2	I	
Ace, A	1 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Dart, W	3 1/2	4000	4 1/2 x 6	36x5	36x10	W	Hahn, J4	1	.....	3 3/4 x 5	36x3 1/2	36x5	W
Ace, B	1	2175	3 3/4 x 5	34x3 1/2	34x5	W	Day-Elder, A	1	2100	3 3/4 x 5	34x3 1/2	34x4	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Acme, F	1 1/2	2475	3 3/4 x 5	34x3 1/2	34x5	W	Day-Elder, B	1 1/2	2300	3 3/4 x 5	34x3 1/2	34x5	W	Hahn, DE	2	.....	4 1/2 x 5 1/2	36x4	36x7	W
Acme, A	2	3050	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, C	2	2750	4 1/2 x 5 1/2	36x4	36x6	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Acme, C	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, D	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	38x10	W
Acme, E	5	6150	4 1/2 x 6	36x6	40x12	W	Day-Elder, E	5	3700	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Hahn, EF	5 1/2	.....	4 1/2 x 6	36x6	40x12	W
Air-O-Flex, C	1 1/2	.....	3 3/4 x 5 1/2	36x3 1/2	36x5	I	Day-Elder, F	5	4600	4 1/2 x 6	36x5	40x6 1/2	W	Hal-Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
All-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Dearborn, F	1 1/2	2180	3 1/2 x 5	34x4	34x5	W	Hal-Fur, B	2 1/2	3250	4 1/2 x 5 1/2	36x5 1/2	38x7	W	
All-American, B-1	1	1795	3 1/2 x 5	32x4	32x4	I	Dearborn, 48	2	2590	3 3/4 x 5 1/2	34x4 1/2	34x7	W	Hall	2 1/2	.....	4 1/2 x 5 1/2	36x4 1/2	36x4 1/2	W
All-American-C-1 1/2	1 1/2	2195	3 1/2 x 5	34x4	34x5	I	Defiance, D	1 1/2	2550	3 3/4 x 5	35x5 1/2	36x6 1/2	I	Hall	3 1/2	.....	4 1/2 x 5 1/2	36x5 1/2	36x5 1/2	W
American, 40	4	4575	4 1/2 x 6	36x5	36x10	W	Defiance, E	2	2750	3 3/4 x 5	35x5 1/2	38x7 1/2	I	Hall	5	.....	4 1/2 x 6 1/2	36x5	40x6 1/2	W
Apex, C	1	1745	3 1/2 x 5 1/2	33x4 1/2	32x3 1/2	I	DeKalb, E2 1/2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Hall	7	.....	4 1/2 x 6 1/2	36x5	40x6 1/2	C
Apex, D	1 1/2	1915	3 1/2 x 5 1/2	32x3 1/2	32x4	I	Denby, 12	1	2400	3 3/4 x 5	35x5	36x6	I	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W	
Apex, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x6	I	Denby, 134	2	2800	3 3/4 x 5	36x3 1/2	36x6	I	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W	
Armleder, HW	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x4 1/2	W	Denby, 25	3	3600	4 1/2 x 5 1/2	36x4	36x7	I	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36x5	36x5 1/2	W
Armleder, KW	3 1/2	.....	4 1/2 x 6	36x5	36x5 1/2	W	Denby, 27	4	4600	4 1/2 x 5 1/2	36x5	36x5 1/2	I	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6 1/2	W
Armleder, 20	1	.....	3 3/4 x 5 1/2	34x3 1/2	34x5	W	Denby, 210	5	5350	4 1/2 x 5 1/2	36x6	36x6 1/2	I	Hawkeye, K	1 1/2	2365	3 3/4 x 5 1/2	34x3 1/2	34x5	I
Atco	1 1/2	2450	3 3/4 x 5 1/2	34x5	36x6	I	Dependable, A	1 1/2	1670	3 1/2 x 5	34x5	36x6	W	Hawkeye, M	2	2915	4 1/2 x 5 1/2	36x4	36x6	I	
Atco	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Dependable, C	1 1/2	2350	3 3/4 x 5 1/2	34x3 1/2	34x5	W	Hawkeye, N	3 1/2	.....	4 1/2 x 6	38x7 1/2	44x10 1/2	I
Atlas, 1	1	.....	3 1/2 x 5	32x4 1/2	32x4 1/2	I	Dependable, D	2	2650	4 1/2 x 5	34x5	36x6	W	Hendrickson	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Atterbury, 20R	1 1/2	2775	3 3/4 x 5	34x3 1/2	34x5	W	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Hendrickson	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5 1/2	W	
Atterbury, 7CX	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4 1/2	W	Dependable, G	3 1/2	35	0	4 1/2 x 6	36x6	38x7	W	Hendrickson	5	5400	5 x 6	36x6	40x6 1/2	W
Atterbury, 7D	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5 1/2	W	Diamond-T, T	1 1/2	2450	3 3/4 x 5 1/2	36x3 1/2	36x5	W	Highway, A 410	4	.....	4 x 6	36x5	36x6 1/2	W
Atterbury, 8E	5	5975	4 1/2 x 6	36x5	40x6 1/2	W	Diamond-T, FS	1 1/2	2715	3 3/4 x 5 1/2	36x3 1/2	36x5	W	Highway, B 510	5	.....	4 x 6	36x5	40x6 1/2	W
Autocar, 21UF	2	2300	4 1/2 x 4 1/2	34x4	34x5	D	Diamond-T, U	2	2835	4 x 5 1/2	36x4	36x7	W	Higrade, A18	1	2100	3 1/2 x 5	35x5	35x5	W	
Autocar, 21UG	2	2400	4 1/2 x 4 1/2	34x4	34x5	D	Diamond-T, K	3 1/2	3925	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Higrade, B20	1 1/2	2500	4 1/2 x 5 1/2	34x5	36x6	W	
Autohorse, 10	5	2100	3 3/4 x 5	34x10	.....	I	Diamond-T, EL	5	4615	4 1/2 x 5 1/2	36x6	40x6 1/2	W	Huffman, B	1 1/2	2075	3 1/2 x 5	34x3 1/2	34x6	W
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	35x5 1/2	38x7 1/2	W	Diamond-T, S	5	4800	4 1/2 x 6	36x6	40x6 1/2	W	Huffman, C	1 1/2	1875	3 x 5 1/2	34x3 1/2	34x6	I	
Available, H2 1/2	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x8	W	Diehl, A	1	.....	3 1/2 x 5	34x4 1/2	34x5	W	Hurlbert	1 1/2	2850	4 x 5 1/2	34x4	34x5	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x10	W	Doane	2 1/2	4100	4 1/2 x 5 1/2	36x5	36x7	C	Hurlbert	2 1/2	3750	4 1/2 x 5 1/2	36x4	36x4 1/2	W	
Available, H5	5	5575	4 1/2 x 6	36x6	40x12	W	Doane	3 1/2	5100	4 1/2 x 5 1/2	36x5	36x5 1/2	C	Hurlbert	3 1/2	4400	4 1/2 x 6	36x5	36x5 1/2	W	
Available, H7	7	6875	5 x 6 1/2	36x6	40x14	D	Doane	6	6000	4 1/2 x 6 1/2	36x6	40x6 1/2	C	Hurlbert	5	5250	4 1/2 x 6	36x5	40x6 1/2	W	
Avery	1	.....	3 x 4	34x5 1/2	34x5 1/2	.....	Dodge Brothers	1 1/2	1085	3 3/4 x 4 1/2	33x4	33x4	B	Indep'd't (Iowa), E	1 1/2	2040	3 3/4 x 5 1/2	34x3 1/2	34x5	I
Beck, A Jr.	1	1800	3 3/4 x 5	34x3 1/2	34x4	I	Dorris, K-4	2	3400	4 1/2 x 5 1/2	36x4	36x7	W	Indep'd't (Iowa), F	2	2495	4 1/2 x 5 1/2	34x4	34x6	I	
Beck, C	2	2550	4 1/2 x 5 1/2	34x4	36x6	I	Dorris, K-7	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x10	W	Indep'd't (Iowa), F	1	1885	3 1/2 x 5	34x3 1/2	34x4	W	
Bell, O	2 1/2	.....	4 1/2 x 5 1/2	34x4	34x7	I	Douglas, G	1 1/2	2050	3 3/4 x 5 1/2	34x3 1/2	34x5	W	Indep'd't (Ohio) F	1 1/2	2585	3 3/4 x 5	36x3 1/2	36x5	W
Bell, E	1 1/2	.....	3 3/4 x 5 1/2	35x5	36x6	I	Douglas, H	2	2560	4 1/2 x 5 1/2	34x4	36x7	I	Indep'd't (Ohio) H	3 1/2	3285	4 1/2 x 5 1/2	36x4	36x4 1/2	W
Belmont, A	.....	.....	3 3/4 x 4 1/2	31x4	.....	I	Douglas, I	3	3250	4 1/2 x 5 1/2	35x5	36x8	W	Indep'd't (Ohio) K	3 1/2	4285	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Belmont, B	1 1/2	.....	3 3/4 x 5 1/2	34x4 1/2	34x5	I	Duplex, Limited	1	2775	4 x 5 1/2	35x5 1/2	38x7 1x								

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
K-Z	1	\$2250	3 1/2 x 5	34x3 1/2	34x5	W	Parker, F20	3 1/2	\$4400	4 1/2 x 6	36x5	40x5d	W	Success, B	2 1/2	\$2850	4 1/2 x 5 1/2	34x4	36x7	W
K-Z	1 1/2	2750	3 1/2 x 5	36x4	36x6	W	Parker, M20	5	1785	4 1/2 x 6	36x6	40x6d	W	Sullivan, F	1 1/2	2350	3 1/2 x 4 1/2	36x4	36x5	W
K-Z	2 1/2	3250	4 1/2 x 5 1/2	36x4	36x8	W	Piedmont, 4-30	1 1/2	1785	3 1/2 x 5	34x4	34x4	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4	36x7	W
K-Z	3 1/2	4250	4 1/2 x 5 1/2	36x5	40x10	W	Pier co-Arrow	2	3750	4 1/2 x 5 1/2	36x4	36x4d	W	Sullivan, H	3 1/2	4650	4 1/2 x 5 1/2	36x5	36x5d	W
K-Z	5	5200	4 1/2 x 5 1/2	36x6	40x6d	W	Pier co-Arrow	3 1/2	4950	4 1/2 x 5 1/2	36x5	36x5d	W	Superior, D	1	1800	3 1/2 x 5	34x4 1/2	34x4	W
Lange, B	2	3000	4 1/2 x 5 1/2	36x4	36x6	C	Pier co-Arrow	5	5700	4 1/2 x 5 1/2	36x5	40x6d	W	Superior, E	2	2750	4 1/2 x 5 1/2	36x4	36x6	I
Larrabee, U	1 1/2	2400	3 1/2 x 5	34x3 1/2	34x5	W	Pioneer, B	1	2190	3 1/2 x 5 1/2	36x3	36x5	W	Super Truck, 50	2 1/2	....	4 x 6	36x4	36x8	W
Larrabee, K	2 1/2	3400	4 1/2 x 5 1/2	36x4	36x7	W	Pioneer, N	1 1/2	2790	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Super Truck, 70	3 1/2	....	4 1/2 x 6	36x5	40x5d	W
Larrabee, L	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Pioneer, F	2	3190	4 1/2 x 5 1/2	36x4	36x7	W	Super Truck, 100	5	....	4 1/2 x 6	36x5	40x6d	W
Larrabee, W	5	5100	4 1/2 x 6	36x6	40x6d	W	Pioneer, J	3 1/2	4190	4 1/2 x 5 1/2	36x5	36x5d	W	Super Truck, 150	7 1/2	....	5 x 6	36x6	40x7d	W
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Pittsburgh, B	5	4990	4 1/2 x 5 1/2	36x6	40x6d	W	Texas, A35	3 1/2	....	3 1/2 x 5	33x4	33x4	I
Lone Star	1 1/2	1745	3 1/2 x 5	34x4	34x5	W	Powder, F	2 1/2	320	2 1/2 x 4	28x3 1/2	28x3 1/2	C	Texas, TK39	1 1/2	....	3 1/2 x 5	36x6	36x7	W
Luedinghaus, K-S	2	2790	4 1/2 x 5 1/2	36x4	36x7	W	Powder, C	1 1/2	4360	3 1/2 x 5 1/2	36x6	36x6	W	Texas, TK	1 1/2	....	3 1/2 x 5	36x6	36x7	W
Luedinghaus, KL	2	2890	4 1/2 x 5 1/2	36x4 1/2	34x5	W	Premcar, B 143	1 1/2	2350	3 1/2 x 5	36x6	36x6	W	Tiffin, GW	1 1/2	2695	4 1/2 x 5 1/2	36x4	36x5	W
Luedinghaus	1 1/2	....	3 1/2 x 5	34x3 1/2	34x5	W	Rainier, R-11	1 1/2	2150	3 1/2 x 5	35x5	35x5	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36x4	36x3 1/2	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x6	W	Rainier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5d	W	Tiffin, PW	3 1/2	4760	4 1/2 x 5 1/2	36x5	36x5d	W
Maccar, H	1 1/2	3750	4 1/2 x 5 1/2	36x4	36x4d	W	Rainier, R-19	1	2350	3 1/2 x 5	34x3 1/2	34x4	W	Tiffin, TW	5	5850	4 1/2 x 6	36x6	40x6d	W
Maccar, M-2	3 1/2	4500	4 1/2 x 6	36x5	36x5d	W	Rainier, R-16	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x5	W	Tiffin, UW	6	6050	4 1/2 x 6	36x6	40x12	W
Maccar, G	5	5500	4 1/2 x 6	36x5	40x6d	W	Rainier, R-18	2	2950	4 1/2 x 5 1/2	34x4	34x6	W	Titan, Transport	3 1/2	4550	4 1/2 x 6	36x6	40x6d	I
Mack, AB	1 1/2	3150	4 x 5	36x4	36x3 1/2	C	Ranger, TK-20-2	2	2575	3 1/2 x 5	34x3 1/2	34x5	W	Titan, 5-Ton	6	5400	4 1/2 x 6	36x5	40x6d	I
Mack, AB	1 1/2	3000	4 x 5	36x4	36x3 1/2	C	Reo, F	1 1/2	1385	4 1/2 x 5 1/2	34x4 1/2	34x4 1/2	B	Tower, J	2 1/2	3400	4 1/2 x 5 1/2	34x4	36x4d	I
Mack, AB	2	3750	4 x 5	36x4	36x4d	C	Reliance, 10A	1 1/2	2500	4 x 5 1/2	36x3 1/2	36x5	I	Tower, H	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W
Mack, AC	3 1/2	4950	5 x 6	36x5	40x5d	C	Reliance, 10B	2	2825	4 x 5 1/2	36x6	36x7	I	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x5	W
Mack, AC	5	5500	5 x 6	36x6	40x6d	C	Reliance, 20C	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x4d	I	Traffic, C	2	1595	3 1/2 x 5	34x3 1/2	34x5	I
Mack, AC	6 1/2	5750	5 x 6	36x6	40x12	C	Reliance, 20C	2 1/2	3675	4 1/2 x 5 1/2	36x6	42x9	I	Transport, 20	1	1850	3 1/2 x 5	34x3 1/2	34x4	I
Mack, AC	7 1/2	6000	5 x 6	36x7	40x7d	C	Republic, 10	1	1615	3 1/2 x 5	34x3	34x4	I	Transport, 30	1 1/2	2250	3 1/2 x 5	36x3 1/2	36x5	I
Mack Trac, AB	5	3400	4 x 5	36x4	36x4d	C	Republic, 11X	1 1/2	2195	3 1/2 x 5	34x3 1/2	34x5	I	Transport, 50	2 1/2	2785	4 1/2 x 5 1/2	36x4	36x7	I
Mack Trac, AC	7	4950	5 x 6	36x5	40x5d	C	Republic, 19	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	I	Transport, 70	3 1/2	4195	4 1/2 x 6	36x5	36x10	I
Mack Trac, AC	10	5500	5 x 6	36x6	40x6d	C	Riker, B	3	3845	4 1/2 x 5 1/2	36x5	36x10	I	Traylor, B	1 1/2	2075	3 1/2 x 5 1/2	34x3 1/2	34x5	W
Mack Trac, AC	13	5750	5 x 6	36x6	40x12	C	Riker, BB	4	4700	4 1/2 x 6	36x5	36x5d	W	Traylor, C	2	2875	4 1/2 x 5 1/2	36x4	36x7	W
Mack Trac, AC	15	6000	5 x 6	36x7	40x7d	C	Riker, BB	4	4700	4 1/2 x 6	36x5	36x5d	W	Traylor, D	3	3375	4 1/2 x 5 1/2	36x4	36x8	I
Master, JW	1 1/2	2690	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Rock Falls, 9	1 1/2	2800	3 1/2 x 5 1/2	34x3 1/2	34x5	B	Triangle, AA	3 1/2	1600	3 1/2 x 5	35x5 1/2	35x5 1/2	I
Master, W	2 1/2	3290	4 1/2 x 5 1/2	34x4	36x7	D	Reo, C.W.	1 1/2	2800	3 1/2 x 5 1/2	34x3 1/2	34x5	B	Triangle, A	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x6	I
Master, D	2 1/2	3540	4 1/2 x 5 1/2	34x4	36x7	W	Reo, G.S.W.	4	4500	4 1/2 x 6	36x5	36x6d	W	Triangle, C	2	2700	3 1/2 x 5 1/2	36x4	36x6	I
Master, A	3 1/2	4100	4 1/2 x 6	36x5	40x5d	W	Reve, H.W.	2	3300	4 x 5	34x4	36x3 1/2	W	Triangle, B	2 1/2	2950	4 x 5 1/2	36x4	36x7	I
Master, E	3 1/2	4610	4 1/2 x 6	36x5	40x5d	D	Reve, C.D.W.	4	3300	4 x 5	34x4	36x3 1/2	W	Triumph	1 1/2	2400	3 1/2 x 5 1/2	36x3 1/2	36x5	W
Master, B	5	5200	4 1/2 x 6	36x6	40x6d	D	Reve, G.S.W.	3	4150	4 x 6	34x5	36x5d	W	Triumph, HB	2	2900	3 1/2 x 5 1/2	36x4	36x7	W
Master, F	5	5410	4 1/2 x 6	36x6	40x6d	D	Reve, G.P.W.	3	5250	3 1/2 x 5 1/2	38x7 1/2	42x9 1/2	W	Twin City, B.W.	2	....	4 x 5 1/2	36x4	36x7	I
Master, T	6	3740	4 1/2 x 5 1/2	34x4	36x4d	D	Reve, F.W.	5	5500	4 1/2 x 6	36x6	40x6d	W	Twin City, A.W.	3 1/2	....	4 1/2 x 6	36x5	40x5d	W
Maxwell, 1 1/2	1 1/2	1532	3 1/2 x 4 1/2	32x3	32x4	W	Rumely	1 1/2	865	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Twin City, FWDB	3 1/2	4750	5 1/2 x 6	36x6	36x6	I
Monomine, HT	1	2030	3 1/2 x 5	34x3 1/2	36x5	W	Samson, 15	1 1/2	1135	3 1/2 x 5	35x5	35x5	B	Twin City, FWDA	5	5250	5 1/2 x 6	36x7	36x7	I
Monomine, H	1 1/2	2725	4 x 5	36x3 1/2	36x5	W	Samson, 25	2	2195	3 1/2 x 5	34x3 1/2	34x5	B	Ultimate, A	2	3200	4 x 5 1/2	36x3 1/2	36x5	W
Monomine, D	2	4270	4 x 6	36x4	36x4d	W	Sandow, G	1	2775	3 1/2 x 5	34x3 1/2	34x5	B	Ultimate, AJ	2	3450	4 1/2 x 5 1/2	35x5 1/2	36x5	W
Monomine, G	3 1/2	4270	4 x 6	36x4	36x4d	W	Sandow, I	2	3175	3 1/2 x 5	34x3 1/2	34x5	B	Ultimate, B & BL	3	3750	4 1/2 x 5 1/2	36x4	36x4d	W
Monomine, J	5	5450	4 1/2 x 6	36x6	40x6d	W	Sandow, CG	1 1/2	2 90	3 1/2 x 5	34x3 1/2	34x5	W	Union, F	2 1/2	3150	4 x 6	36x5	36x8	I
Moline, 10	1 1/2	2250	3 1/2 x 5	34x5 1/2	36x10	I	Sandow, J	2 1/2	3175	4 1/2 x 5 1/2	36x4	36x7	W	Union, H	4	3975	4 1/2 x 6	36x6	36x10	I
Morland, 20N	1 1/2	2830	3 1/2 x 5	35x5 1/2	36x10	W	Sandow, L	3 1/2	4095	4 1/2 x 5 1/2	36x5	36x5d	W	Union, J	6	5400	5 x 6	36x6	40x14	I
Morland, 20B	2 1/2	3900	4 1/2 x 5 1/2	36x4	36x8	W	Sandow, M	5 1/2	4775	4 1/2 x 5 1/2	36x6	40x6d	W	United, A	1 1/2	2445	3 1/2 x 5 1/2	36x3 1/2	34x5	I
Morland, 20																				

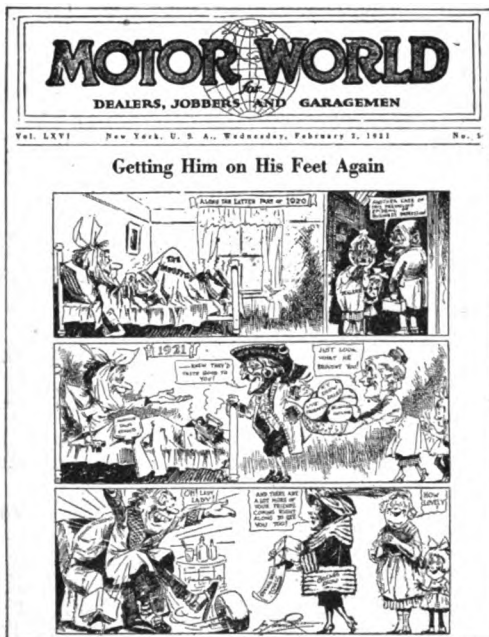
MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

Vol. LXVI

New York, U. S. A., Wednesday, February 16, 1921

No. 7



—And Now,

LET'S DRIVE!



The Dealer Shows Will Put the Flush of Health Into His Cheek Again

Show Leads Northwest Along the Road to Better Times

Dealers, with All Minneapolis Supporting Them in City-wide Trade Week, Make a Valiant Fight Against Difficult Odds and Start Business on the Upward Trend—A Story of Coming Prosperity and of Automobile Show Promotion on a New Scale with Public Spirit Paying the Bill.

By NEAL G. ADAIR

THIS is a story of grit.

This is a story of business revival wrought by the sheer force of co-operative community spirit.

This is the story of the Minneapolis Automobile Show and Trade Week, in which retailers, wholesalers, manufacturers and bankers got behind the automotive industry and helped it break the ice of frozen business in this great merchandising center of the great Northwest.

IN Minneapolis this is not merely automobile show week nor trade week. The show is drawing fine crowds and they are buying some cars. The trade week idea is filling the store aisles and moving merchandise too long on the shelves. The show is helping the stores and what the stores are doing is helping the show. But beyond this, all Minneapolis is holding open house to the vast territory which it serves as a gateway to and from the East and South. Manufacturers are bringing their wholesalers in to inspect new goods and remake shipping schedules. Wholesalers, in the automotive and other lines, are holding individual exhibits and renewing contacts with their customers. The builders are holding a notable show of home and business construction and the furniture factories and branch houses are entertaining visitors, from both trade and public, from far and near.

It is a big week in Minneapolis—for everybody in business. And it is a big week because the automobile men and the other business men who co-operated with them had the courage to take up a forlorn hope and carry it through to success.

The town that coined "Let's go!" ten years before the American army carried the phrase half-way around the world refused to be stumped when long leases for other purposes shut the automobile show out of the only available buildings in the center of the city or on the Midway leading to St. Paul.

The automobile dealers, after considering the feasibility of the Northwest Terminal, two miles from town, let the word go out that the season probably would pass without a show. They wanted to learn whether the merchants

New Exposition Building

MINNEAPOLIS is to have a new \$500,000 exposition building for next year's show. The decision to prepare immediately for the erection of the building this year was reached at a meeting of automotive, financial, industrial and mercantile men during show week.

This means that next year the Minneapolis show will be a great farm power exposition with cars and trucks. The exposition building will be near the center of the city.

cared enough about a show as a business stimulant to help overcome the handicap of a poor location. The merchants did want the show. They demanded it. With the automotive men they called a meeting of the city's most influential and active men in finance, commerce and industry, at which the Minneapolis Automobile Show and Trade Week Association was formed and support of the automobile exposition pledged by all lines of business.

That was only thirty days before the

date set for the show and there was a big job ahead. But the work was done and in the face of public feeling dead set against buying anything except outright necessities in the five States of the Minneapolis distributing territory—Minnesota, North and South Dakota, Montana and Wyoming—the show has been attended during its first four days by more than 65,000 people and all business has felt the upward pressure exerted by the week's program.

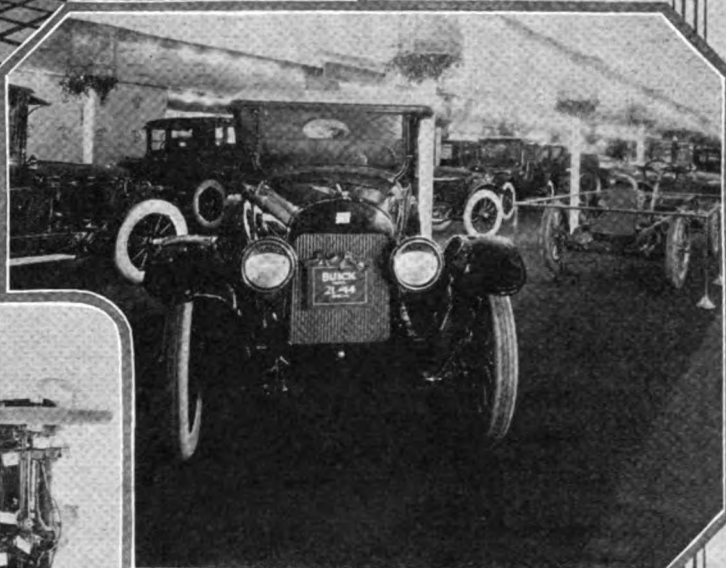
The show is bringing into the distributors' headquarters country dealers who have gone more than five months almost without sales, some who have not delivered a car or truck since late July and early August. It has brought in already 250 bankers and more are coming, many from long distances. It is bringing in the former customers of these bankers, who are prospects for the country dealers, many of them prospects with money to invest in automotive equipment, despite a general scarcity of ready cash in the territory. The show is demonstrating to all these, including some dealers from remote districts, that demand, though suffering from weakened buying power, is alive, and that *there are people, if the trade will search them out, who have the money to buy.*

These out-of-town dealers are hearing the story of a Minneapolis car and tractor dealer who has been making sales—and for cash—right through December and January, on both his car and implement lines. And the out-of-town dealers are hearing the story of the Minneapolis service manager who has personally canvassed his owners for service business—and has made a profit on it. The out-of-town dealers are hearing other stories of courage and ingenuity in the face of difficulty in the offices of

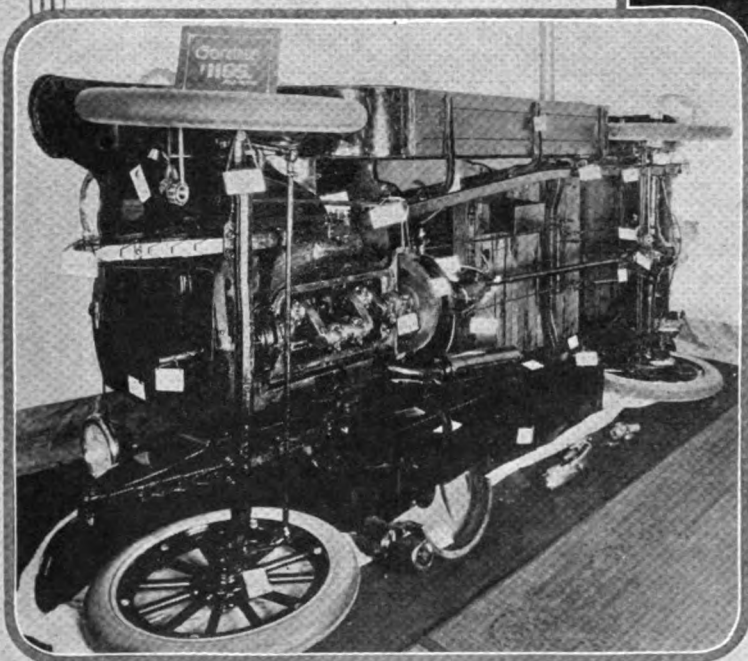
Some Merchandising Atmosphere in the Minneapolis Show



Dort drew people to its exhibit with an attention-compelling imitation salesroom floor.



Looking down the main aisle of the passenger car section with Buick in the foreground. Who would have known the show was staged in a warehouse?



Gardner departed from the conventional and showed instead a chassis, a fully equipped car on its side, with tags describing important points in the chassis and frame.

their distributors. And at a big rally in the show building to-day they heard the encouraging story of the industry's prospects for 1921 as indicated by the New York, Chicago and other shows already held.

It has been a long, hard pull for this territory since the price of farm products, backbone of Northwest prosperity, struck the decline. The pull is not over

yet by any means. Bankers and business men are pretty well agreed that tight money, principal obstacle to sales, will continue in a measure until the next harvest, when the bulk of farmer indebtedness to country banks and country banks' obligations to the city institutions will be liquidated. However, improved conditions in credits are in the offing and improved conditions in merchandis-

ing, automobiles, trucks and tractors included, already are here. The "thaw" began in mid-January, with Minneapolis retail sales in both high and low-priced lines showing new life and with a small demand for cars from the territory. And now the show, needed as it was never needed before, is doing what was expected of it, giving the slowly improving sales situation a decided acceleration.

All this could never have happened if the automobile dealers had had to go it alone. They had suffered too much impairment of revenue in the trying final half of 1920 to stand any such expenditure as would have been necessary to give the show the publicity necessary to draw crowds two miles out of town, with no additional attraction such as the gen-

polis firms, carried a feature of some sort advertising the show.

4—Business houses sent out more than 1,000,000 pieces of mail bearing the imprint of the show and trade week.

5—The story of the selection of a show reception committee of six girls from Minneapolis store staffs, the selections being made by a woman investigator on

by the veteran Walter J. Wilmot, found new ways of getting publicity which was news.

As for the show, it is exhibiting practically all the passenger cars and a majority of the trucks distributed from Minneapolis. The automotive equipment section is especially strong, with the Motor & Accessory Manufacturers Association for the first time giving it national sanction. The truck section is given prominence by its location on the entrance floor. The exhibitors report plenty of attention, a few scattered sales and a good grist of prospects.

The show has dancing, movies and a restaurant, traditional features of the Minneapolis exposition. And though it is two miles out, it is the center of Minneapolis this week and its overflow already is appearing on salesroom floors which have been rather lonesome places for a long, long time.

A study of the show and a survey of trade conditions promises a steady, though rather slow increase in sales in the territory from now on. After five months with almost no purchasing of cars there is a pent-up demand which is bound to be loosed in a degree as spring approaches. The trend is indicated by the general run of orders obtained since mid-January, most of which are for April delivery.

In general conditions in the territory may be summed up in this way:

Unfavorable—

1—Frozen credits, widespread in the country districts through insistence of farmers in holding their wheat, the holding being said to average 40 per cent of the crop.

2—Generally weakened buying power as result of depressed prices of practically all products except butter and eggs, coupled with some unemployment, principally in the cities.

3—Resentment of farmers against more rapid decline in price of the things they sell than of those they buy.

Favorable—

1—Absolute necessity of a considerable volume of purchases, principally for replacement, of cars, trucks, tractors and equipment.

2—Unstocked condition of country dealers, who average less than a car apiece on standard lines and who are beginning to appreciate danger of a spring shortage with themselves at the short end.

3—More active effort by dealers to search out prospects with money to buy—one dealer gave out cards at the show, for instance, entitling the bearer to a demonstration, and some others are getting down to a basis approaching intensive canvasses of their selling fields.

4—Savings bank deposits in both Minneapolis and St. Paul are steadily increasing.

The show has proved that optimism is based on fact and not froth, it has put new vigor into a trade that has suffered, and suffered acutely. It has pointed the way, as it has and as it will in other cities, to work, to selling, as the only "legislation" that will cure the ills of the day.

How All Minneapolis Promoted the Minneapolis Show

2

THE MINNEAPOLIS MORNING TRIBUNE, TUESDAY, FEBRUARY 8, 1921 PAGE FIVE

The Latch-String is Out

We are eager to do everything in our power to help make Auto Show guests welcome.

The Store has many conveniences that are at everyone's disposal—Rest Rooms, Postoffice, Free Package Room, Cashier (to cash your checks), and

Shopping Assistance

—at the Personal Service Bureau.

The new Spring modes in Dresses, Suits, Coats, Hats and Skirts are here—a wealth of new style information. The new Silks and Dress Goods, too.

And while you are here, for your home's sake, you should see the right completely, beautifully furnished rooms of the Interior Decorating Studio.

The Dayton Company
DOWNSTAIRS STORE

of the Anniversary Sale

ilk Wais

Downstairs Stock and 400 N.
Extraordinary Sale at

\$3

1

Return to
Last Year's Merchant
Minneapolis, Minn.

**MINNEAPOLIS
BIDS YOU COME**

**AUTO SHOW
TRADE WEEK**

3

**You are Invited
to Minneapolis**

TO PARTICIPATE with other merchants in the Auto Show and Trade Week, held at the Minneapolis Convention Center, February 16-20, 1921.

To meet your customers for the purpose of the Auto Show and Trade Week, held at the Minneapolis Convention Center, February 16-20, 1921.

To see the new Minneapolis National Automobile Show, which will be the largest and most complete ever held in the city.

To see the new Minneapolis National Automobile Show, which will be the largest and most complete ever held in the city.

To see the new Minneapolis National Automobile Show, which will be the largest and most complete ever held in the city.

**Auto Show & Trade Week
Minneapolis, Feb. 16-20, 1921**

The automobile dealers got five times as much publicity as in former years at one-third the expense—to themselves. Here are three examples of co-operative publicity:

1—The "calendar" cut, which was carried on a million envelopes and letter-heads mailed during the three weeks before the show. The dealers furnished the cuts and ran letter-head and envelope reprints for some of the business houses—at a total expense of only \$500.

2—One of the hundreds of automobile show notes carried in general advertising, not only in Minneapolis but throughout the territory.

3—The Civic and Commerce Association, whose members are the city's leading citizens, sent out many thousands of folders with a title page like this.

eral industrial exposition combined with the show in former years to command interest. So the dealers turned to their fellow merchants, as dealers in any large merchandising city can do, and with a promotion expenditure only a third of that of 1920 obtained five times as much publicity, and publicity in quarters where their own appeals would not have penetrated.

After all the city's business men had been interested in the Automobile Show and Trade Week project, this is what was done to carry the story to the city and territory:

1—The railroads entering Minneapolis from all directions were induced to grant fare and half for return trips anytime during the week, without restrictions or red tape of any sort.

2—Moving picture films were prepared telling the story of the week and shown in 1200 theatres of the city and territory, the theatre men donating the time consumed in showing them.

3—Mercantile advertising, both wholesale and retail, throughout the five states, where controlled or inspired by Minnea-

the basis of courtesy and good appearance, had the city talking for a week and prompted numerous newspaper stories, several of them illustrated with pictures of the girls chosen.

6—The entire Legislature was given and accepted an invitation to attend the show.

7—Invitations were sent to 3000 country bankers to attend the show and 2000 accepted, 250 putting in an appearance the first three days.

8—The Minneapolis Automobile Dealers Association ran for three weeks before and during the show a full page newspaper advertising campaign promoting the automobile and advising purchases now.

9—A contest for the best impersonator of famous "movie" stars, held in the motion picture theatre at the show, caused city wide comment and won frequent newspaper mention.

10—Regular rates in the hotels, adhered to by hotel men who joined the merchants in insisting that the show be held, helped to attract visitors.

In brief, the show management, headed

HARD WORK—The Great Need In the Farm Power Industry

Dealers, Distributors and Manufacturers at the Sixth National Tractor Show Find the Farmer's Buying Power Crippled, but He Has Resources and Feels the Need of Power Farming Machinery—A Story of the Columbus Show

By DONALD D. BLANCHARD

COLUMBUS, Feb. 12.

THE volume of farm machinery business during the present year will depend largely on what the dealer, distributor and manufacturer make it. At the Sixth National Tractor Show, at Columbus, the too-much-talked-of buyers' strike was so repeatedly referred to that one might almost think the reason for the current depression was purely psychological, instead of mostly economic. The idea seemed to be that the farmer would not buy now because he wouldn't and that was all there was to it.

As a matter of fact, agriculture has gone down into the valley along with almost every other industry, and the financial problems of the farmer are right now just as acute as those of any other business man. A considerable portion of his crops has not been liquidated, and, although the farmer is wealthy in goods, he is short of money. He is curtailing his expenditures just as every other good business man is, and is hesitant about spending his cash.

BUT, with the coming of spring and summer, he will need machinery, not only to reduce his production costs so that he can operate profitably at the reduced price levels but also for replacement. The dealers who merchandise intensively are going to sell power farming machinery this year, *not in as great volume as in previous years, but infinitely more than the dealer who blames the hard times on the psychology of the farmer, and sits in his office, waiting for a change in heart on the part of the farmer. This type of dealer is due for an unprofitable season.*

The attitude of the farmer toward buying will commence to melt with the snow. He never has been much of a buyer during the winter months, but he becomes a totally different individual when it is time for plowing. His pessimism will be replaced with optimism, and he will come into the market for machinery. This is no unsupported prediction, but the opinion of the head of the Ohio State Grange, a rural organization with 102,000 members, and other farm students.

The farmer at the show was not actively in the market. He was there primarily to be educated. One dealer said that he had three prospects at the show, all of whom had the ready cash to buy a tractor, and they all admitted that they ought to have one. But they were not buying just now. Another instance cited was of two farmers living within

a short distance of each other—one needed a manure spreader and the other a corn planter. Neither of them would buy now. They were going to worry

Is THIS Economy?

THE farmer is economizing. He is refusing to purchase power farming equipment, believing that this is economy.

The one big selling effort that will sell tractors in 1921 must be built around the economy of power farming operations.

The Sixth National Tractor Show, in Columbus, emphasized the need of strong merchandising of tractors and power farming equipment—hard work and lots of it if the industry is to be brought back to normal.

The show revealed many other interesting things concerning tractors. Read about them on this and the following pages.

along somehow, each using the other's tools, for the time being. These two instances are indicative of the conditions confronting the dealer to-day.

The farmer is not bankrupt as a few farm organizations have been trying to

show. During the week, it developed that some of these organizations have been making efforts to keep the farmer from buying. This is unfortunate, as it is felt that just as the farmer was badly advised not to sell his wheat until the market reached \$3 a bushel, so now he is being poorly advised not to buy farm machinery until prices are reduced.

No price reductions were announced at the show, and the manufacturers are a unit in stating that there will be none. They point out that they have made an average increase of 78 per cent on farm machinery since 1913, and that during this period the prices for farm products increased 112 per cent, and the average price of other commodities purchased by the farmer jumped 144 per cent. The manufacturer feels that he cannot safely cut his price until his present inventories have been liquidated and the prices of raw material and labor go down.

Everywhere there was confidence that the coming of spring would see a return of buying. The bottom of the depression has been reached and passed and the long climb back to normal business is in progress. To be sure, the ascent is going to be gradual, and the trade as represented at the show was frank in admitting that the coming season will possibly show a sales volume of only half of the figures attained in previous years.

Retail sales were small, nor is it fair to credit the show with any very large percentage of the dealer and distributor

business. But, the heavy farmer attendance at the show, is taken as conclusive proof that the farmer sees in power farming the solution of the problem of more economical production. In 1820 there were four families on the farm to one in the city. To-day the proportions are reversed. The decreasing farm population must feed an increasing city population. The answer is to put more power under the control of one man. The farmer has no choice. He must adopt power farming methods.

The series of educational lectures given at the show was one of its most important features. They were largely attended by the farmers, and the discussion following each developed much interesting data on what the farmer thinks about power farming. One fact stood out, pre-eminently in the lectures, which is that one of the most important elements in farming is time—to get things done when they should be. In the case of a wet spring, the speed at which the tractor prepares the seed bed enables the farmer to get his work done in the few fair days that such a season affords. Using the slower horse method, he cannot get his crops in at the right time. Then again, in Kansas, to get the maximum

tor merchandising, but the way real farmers with tractor experience repeatedly referred to it indicates that this argument is very nearly of paramount importance.

The bulk of the visitors at the Columbus show were farmers, and this was especially true during the daytime. At night the local townspeople visited the show in considerable numbers, but at no time was the percentage of idly curious undesirably high. The dealer attendance was good, especially during the first part of the week. A count of 500 farmer registration cards selected at random showed that 178 owned tractors. The fact that such a large number of non-owners were interested enough to attend the show, is indicative of the fact that the farmer is considering ways and means of reducing his production costs. A count of 200 dealer cars similarly selected, showed that 161 sold tractors. These figures are of course imperfect but they convey an idea of the character of the attendance.

From the standpoint of attendance, the show was largely a local affair. Possibly 90 per cent of the attendance came from Ohio, and the greater portion of the balance from neighboring states. No

And no doubt there will be such an effect, but the investigation of where the attendance came from, leads one to believe that this effect will be purely local. A show is not national unless it draws people in considerable numbers from all parts of the country, and this show did not, as the great majority of the visitors, both dealer and farmer, came from Ohio. The great bulk of the farming population will know nothing of it, nor will the dealers except through the medium of their trade papers. Perhaps it is unreasonable to expect a tractor show to draw a truly national attendance. Perhaps no tractor show ever will. It might be an improvement to have the show in Chicago next year, and run it simultaneously with the automobile show if suitable accommodations could be obtained. All the dealers from the great middle western farming section would find this location more convenient, and then again, the great numbers of car dealers, who also sell tractors, coming to the automobile show would naturally attend the tractor show.

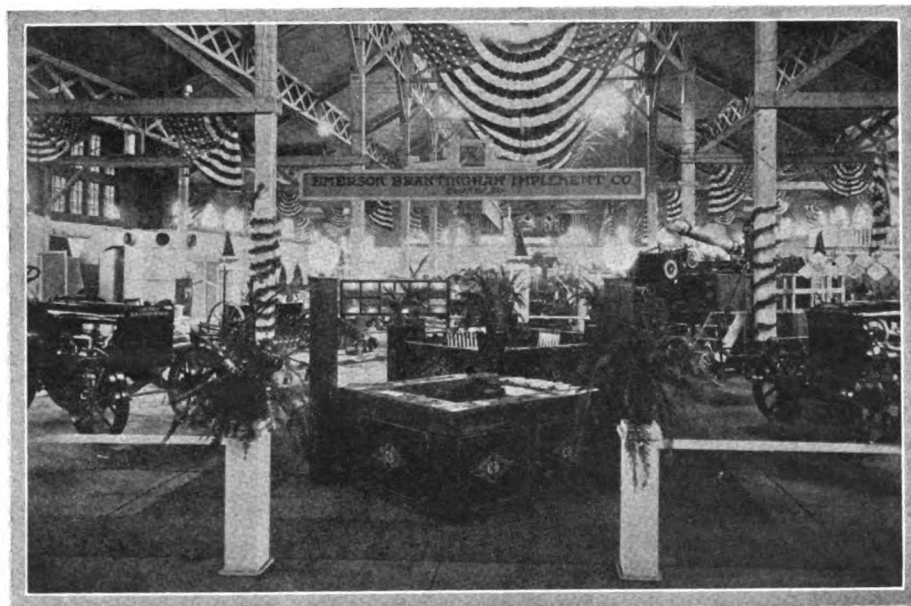
It is difficult to see how this show has worked any real national benefit to the industry. There is no doubt that it had a very stimulating effect locally, and this is really worth while as never before has the east had the opportunity of seeing a tractor show.

As an exhibition, the show was truly national in character. While the number of tractors exhibited was not as high as last year at Kansas City, it must be remembered that we are passing through an unusually tense period, and then again many of the absentees were in the class that has never attained anything but purely local distribution. With few exceptions, all the virile manufacturers in the industry were represented. They have national distribution now, but they are working to make it stronger and comprehensive.

A new standard for shows of this character was set at Columbus. The exhibits were divided among eight buildings, and the tremendous floor space thus made available eliminated any necessity for crowding. On the whole the exhibits were well arranged, and there was plenty of space around the machines displayed for convenient inspection at close range by the visitor. A few manufacturers, however, endeavored to display all of their products, and in consequence really displayed nothing. The exhibits of parts and equipment makers were exceptionally good, and their efforts to provide really worth while displays were well repaid by the interest they created.

Many of the tractors were mounted on platforms which placed them at a more convenient height for inspection. The sectional model, as well as machines from which parts had been removed to reveal internal construction, was present in large numbers. Other makers showed jobs that had been "dolled-up" for the occasion with paint and nickel plating. Electrically operated displays were also present in large numbers. These are features that brought the farmer into the booth for closer inspection. Service was not forgotten either. Allis-Chalmers

One of Many Well-Arranged Displays



The Emerson-Brantingham exhibit was typical of the whole show. The tractor on the right had explanatory placards which were connected with the parts they referred to by ribbons

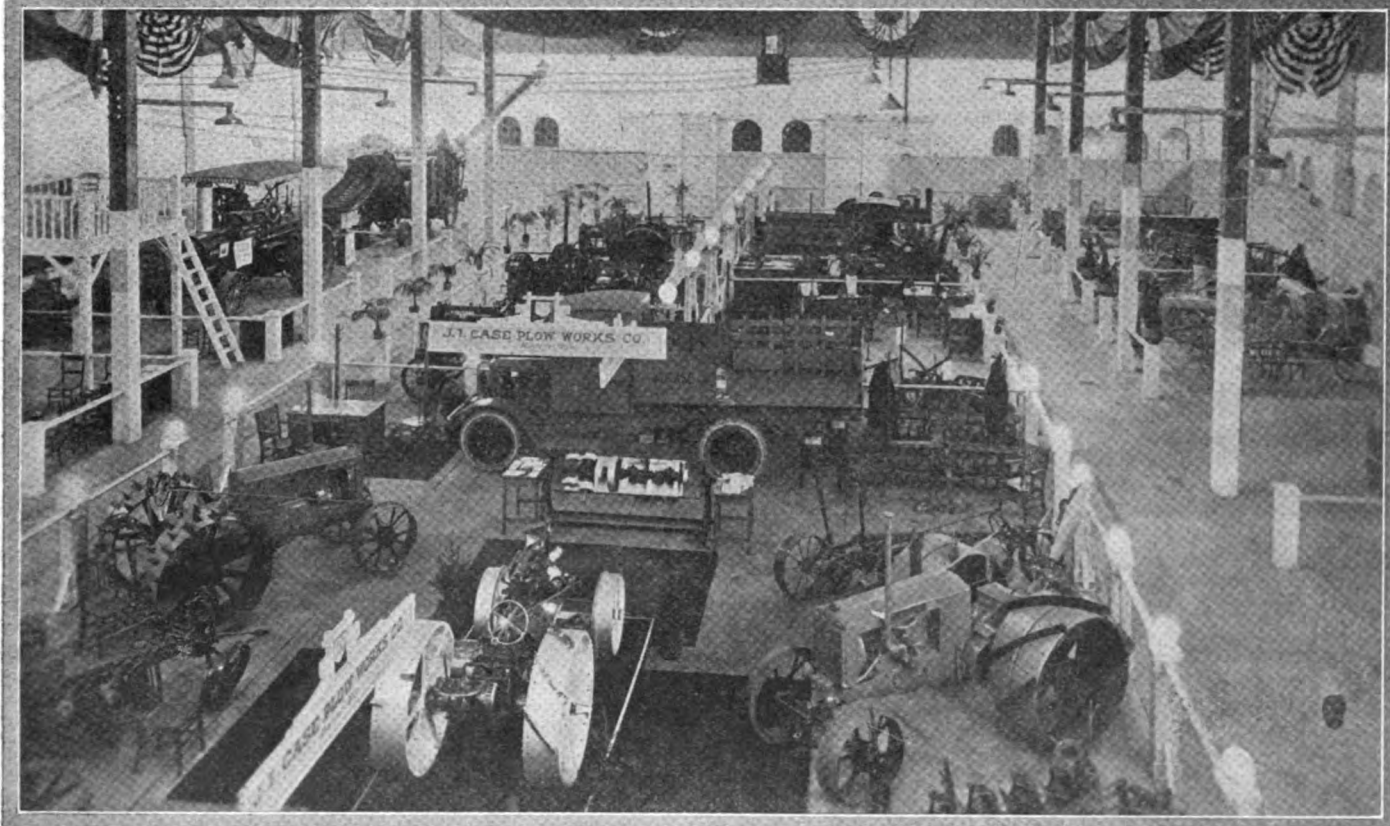
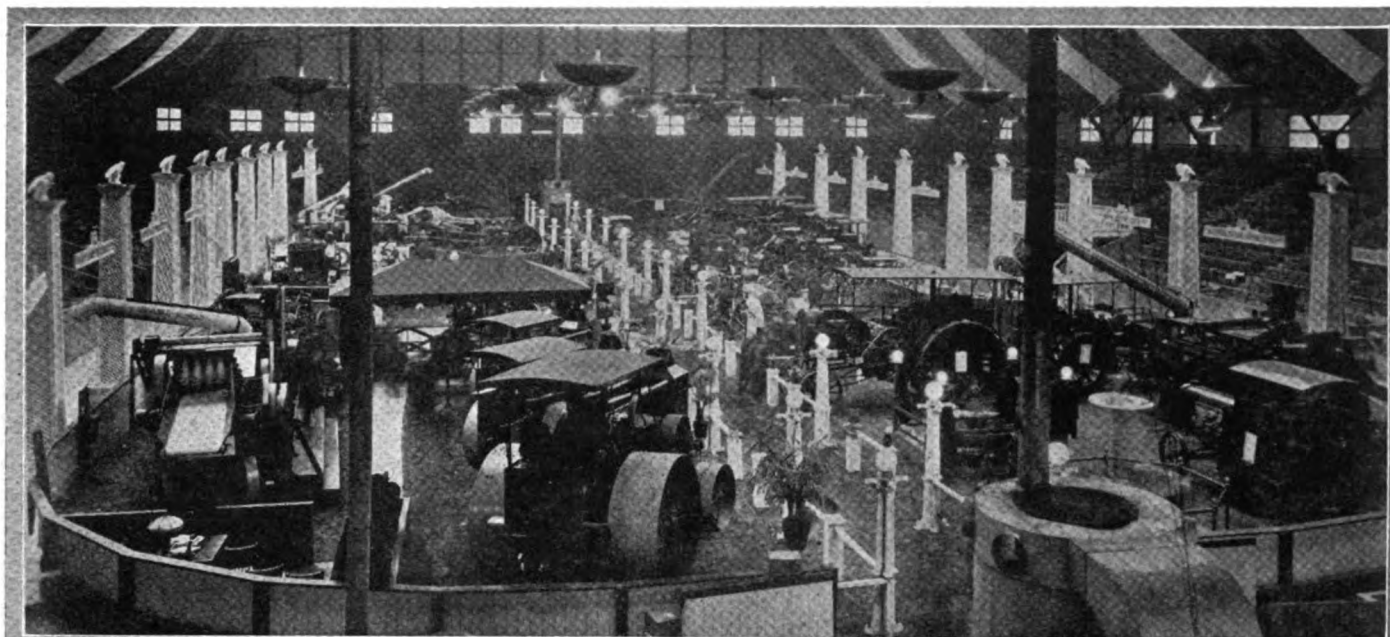
yield of winter wheat, plowing should be done in July or early August, but it is too hot to plow with horses except on a limited scale at this season. The tractor will do the work however, and enable the farmer to get his work done at the most propitious time.

The tractor is a production machine. The time element is of greater interest to the farmer than the margin of cost between tractor and horse farming, which may not be large and is often difficult to prove due to a lack of suitable statistics. This is not a new feature of trac-

admission was charged. Instead each visitor was required to register, after which he was furnished with a button which admitted him to the show. The buttons were of different colors—red for the farmer, blue for the dealer, and white for those not in either of these classifications.

The Sixth National Tractor Show was not intended to be a selling show. Education was primarily the aim of the exhibitors. Yet there is no dodging the fact that the manufacturers expect this education to result eventually in sales.

Power Farming Machinery Was Attractively Displayed at Columbus



The splendid character of the show from the exhibition standpoint is indicated by these two general views. Above is the Coliseum. The arrangement of the machinery exhibits could hardly be improved upon. They were easy to get into and easy to move around in. Every machine was accessible for close inspection. Below is a general view of Building No. 3. The Wallis exhibit is in the foreground. The new Case truck is shown in about the center of the picture. The same high standard of display was carried right through the entire show

had two mechanics, giving exhibitions of dismantling and reassembling one of their engines in 25 minutes. International Harvester had an electrical repair shop, and Moline and John Deere had service displays. In explaining the tractors to the visitor, the maintenance features of the various machines were used

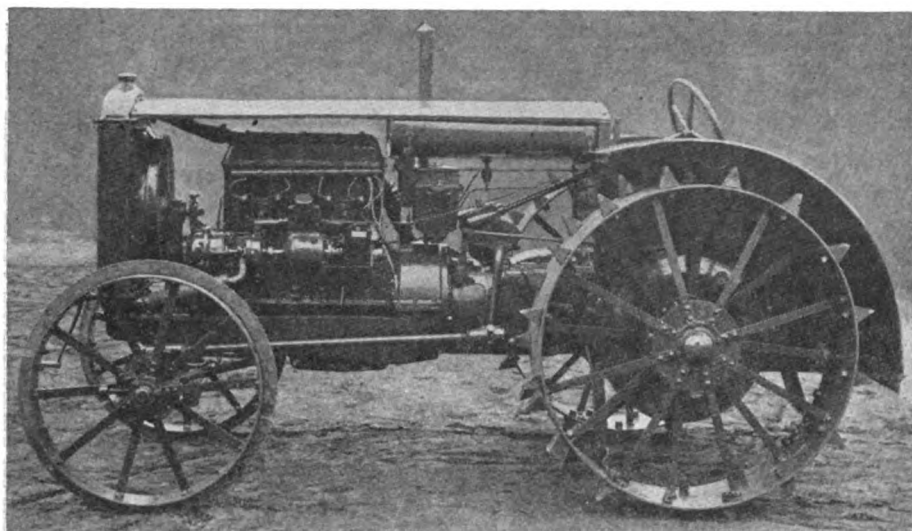
facturers and those based on automobile design, are still represented, and there is no marked change in the relative numerical representation of the two, although most of the tractors shown for the first time were, generally speaking, of the automobile type.

The general characteristics of this type

reduction in a single step is retained.

Although the creeper tractor of the larger type is used more extensively in industrial applications than in farming, the two leading builders of such machines, Holt and Best, were both represented at the show. A new application for this type of tractor is for snow removal in large cities, and the manufacturers were not slow in cultivating this new field, three of them exhibiting tractor-snow plow combinations.

New Allis-Chalmers 12-20 Has Automotive Lines



*This machine is completely manufactured by the Allis-Chalmers company.
The price is \$1,495*

No Frame for Allis-Chalmers

The new Allis-Chalmers 12-20 is of the frameless type, and is completely manufactured by this company. This machine is listed at \$1495. It has a 4-cylinder, $4\frac{1}{2} \times 5\frac{1}{2}$ -in. engine, governed to 1100 r.p.m. by an enclosed governor. The engine is designed to run on gasoline and a supply of 20-gal. is carried in an oval tank over the transmission. A siphon type air washer cleans the air before it enters the carbureter. Fuel is fed by gravity, and lubrication is by pressure. The clutch is of the expanding type, and the gearset gives forward speeds of $2\frac{1}{2}$ and $3\frac{1}{4}$ m.p.h. The final drive is by enclosed internal gears. The clutch used for driving control also controls the belt power. The front axle is in the form of a casting of hollow section, and is pivoted to the engine crankcase at the front, the gearcase cover being extended to form a yoke for the axle.

New Twin City 20-35

The new Twin City 20-35 is priced at \$3250. This is an enlarged reproduction of the 12-20 model. The cylinder dimensions of the 4-cylinder engine are $5\frac{1}{2} \times 6\frac{1}{2}$ -in. The forward speeds are 2.2 and 2.9 m.p.h. It is rated to pull five plows.

The Huber Super-Four is very similar to the Light Four, with the exception that the Midwest engine is used. It plows at 3 m.p.h., and has a maximum speed of $4\frac{1}{2}$ m.p.h. The horsepower rating is 15-30.

The New Uncle Sam

The new 12-20 Uncle Sam is priced at \$1385. The engine is a 4-cylinder, $4 \times 5\frac{1}{2}$ -in. Weidely, and is mounted in the front in the usual manner. Bennet air cleaner and carbureter and Splitdorf magneto with impulse starter are installed. Power is transmitted by a pair of bevel gears to a first cross shaft, then by one or the other of two roller chains to a second countershaft, and then by another roller chain to the rear axle. The entire transmission is enclosed in a cast iron case and runs in oil. The front axle is of the automobile type, and carries the frame on two semi-elliptic springs. The frame is built up of 4-in. channels. The belt pulley is located ahead of the drive wheel, is equipped with a separate clutch and may be run in either direction. A feature of the equipment is a bucket seat for the operator. The machine is rated to pull two plows, and the weight is 3000 lb. The forward speeds are $2\frac{1}{2}$ and $3\frac{1}{4}$ m.p.h.

as principal selling arguments by the salesmen.

Implements and belt machines were also present in large numbers. These have been specially designed for use with the tractor, and many of the implements had improvements which simplified operation. The importance of this phase of farm power merchandising should not be overlooked. Investigation among the dealers at Columbus showed that almost every tractor sale results in the sale of a plow, and that over half the sales include disk harrow. The farmer must have the tools that go with the tractor in order to realize fully on his investment, and the possibilities for profit here are not generally appreciated.

Motor trucks were an important feature of many of the exhibits. This represents a new development of the industry. The tractor manufacturers are branching out so that their dealers will be provided with a complete line of power farming machinery. It is a development that serves further to accentuate the fact that the motor car or truck dealer is particularly well adapted to the merchandising of farm power apparatus because of his knowledge of the service problems involved.

Trends in Tractor Design

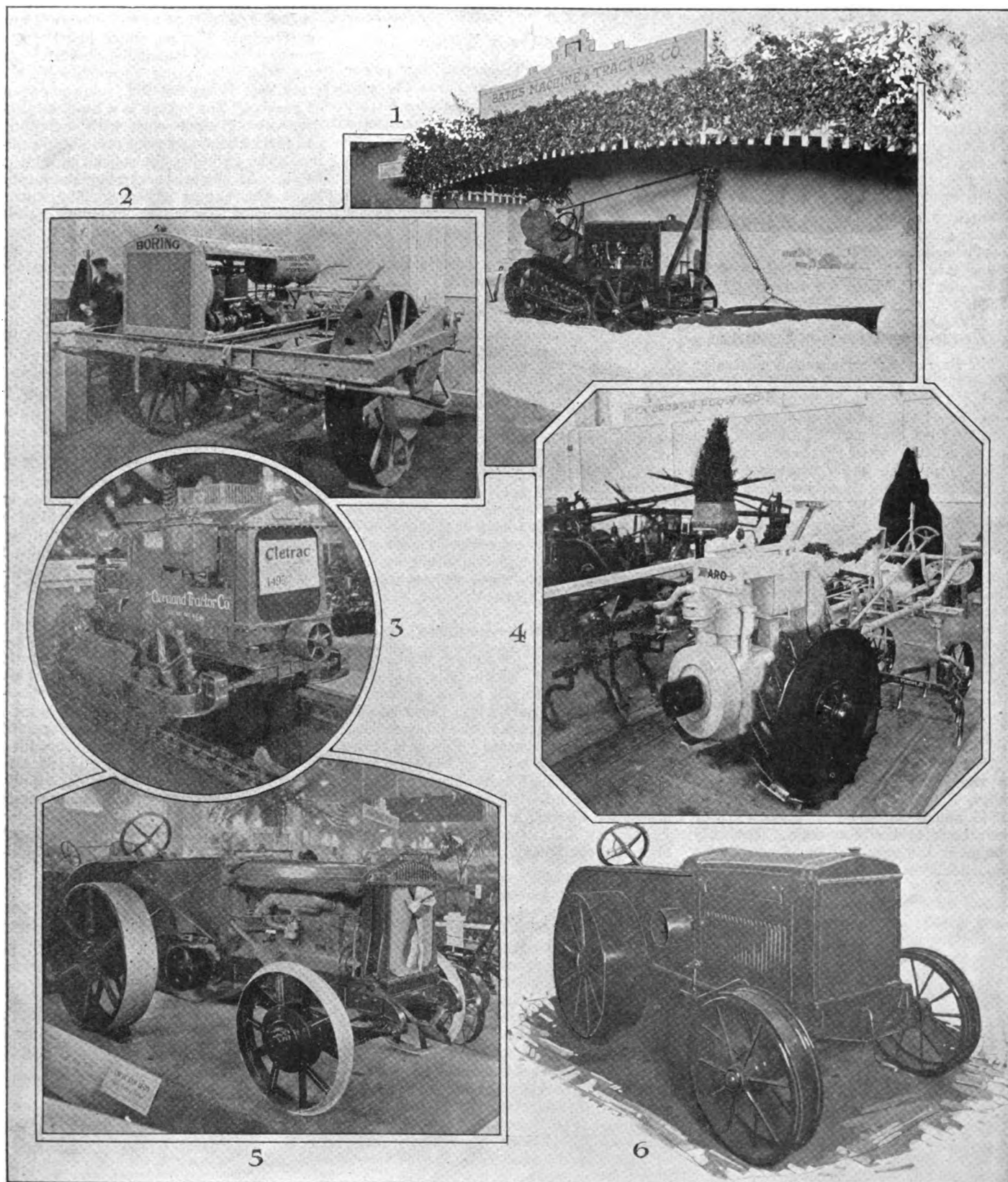
While quite a few new tractors were shown at Columbus there were no striking innovations, most of the new models being designed on approved lines. The two general classes of tractors, those originally developed by implement manu-

are vertical engines located in front, cut gearing for the transmission and final drive, enclosed and running in oil, and the use of ball bearings. The most marked features of the type originated by the implement makers are the use of strap iron for structural parts and of cast exposed gearing for the transmission. It is noticeable that even the tractors of this latter type are gradually getting somewhat cleaner in design.

At least three tractors were shown which had line control, and this feature seems to be gaining in popularity. Practically all of the giant tractors heretofore have been of rather primitive design. Many of them are being built by manufacturers of steam traction engines, who apply the same principles of construction as in their steamers, which are excessively heavy. Another reason for the backward state of design of this type is that the demand is not large enough to warrant quantity production. However, the J. I. Case Threshing Machine Co. has brought out a new and strictly modern design of a very large (40-72 hp.) tractor. This gives the Case company a line of four models of substantially like design.

Worm drive is obviously gaining in favor. However, the worm is not used for the final drive, but rather for the first reduction from the engine crankshaft. The reason for this is that a worm drive is not very efficient when the pressure on the worm surfaces is very high. By using the worm and wheel for the first reduction these excessive pressures are obviated, yet the advantage of a high speed

The Columbus Exhibit—Combined Effective Display with Interesting New Products



1—The Bates Machine & Tractor Co. provided one of the finest displays at the show. The illusion was made complete by a lighting effect on the background which reproduced a snowstorm perfectly. 2—The new Boring cultivator, which has an adjustable tread. 3—Cletrac adopted this method of explaining the tracklayer principle. A uniformed attendant rolled the tractor back and forth on its track. 4—The Aro garden cultivator. 5—New Uncle Sam 12-20. 6—The Ohio tractor

New Case 40-72

The J. I. Case Threshing Machine Co. showed for the first time, a 40-72 h.p. tractor, which follows in general, the lines of the smaller tractors which this company has produced for some time past. All gears are enclosed and run in oil which is a new feature for a tractor of this size. Engine, gearset and rear axle are separate units which are bolted to the frame which is made up of 8- and 10-in. channels. The engine has four 7 x 8-in. cylinders, and runs at a governed speed of 750 r.p.m. The cylinders are cast in pairs and have removable liners. Operating on kerosene, it develops a maximum of 90 h.p. Forward speeds of 2.07 and 3 m.p.h. are provided. Some idea of the size of this machine can be gathered from the fact that the rear wheels are 72-in. in diameter with 20-in. face, and are mounted on 4-in. live axles. The price on this tractor is \$5500.

Boring Cultivator Tractor

The Boring is a combination cultivator and tractor. It is manufactured by the Boring Tractor Corp., Rockford, Ill., and sells for \$1850. It has sufficient clearance to pass over corn 35 in. high, and an adjustable wheel extension feature which permits spanning two rows. It is of the three-wheel type, having its two driving wheels at the front, and a castor wheel, which is used for steering at the rear. The tread can be varied from 54 to 79 in. by turning a crank located on the front cross member of the frame. The power plant consists of a 4-cylinder Waukesha with 4½-in. bore and 5¼-in. stroke. The gearset has two speeds, and the high gear speed of the tractor is 3½ m.p.h. The power take-off, which is located on the right outside of the frame, is independent of the engine clutch.

Bates Wheel Type Tractor

A wheel-type tractor is now being made by the Bates Machine & Tractor Co., Joliet, Ill. The new model is priced at \$1545 and is identical with the crawler clear back to the rear axle. The only change is the substitution of wheels for the tracklayer driving mechanism. The

Midwest engine is used in the new model.

The new Hart-Parr 20 was exhibited for the first time at the show. This machine has previously been described in Motor World, and is similar in almost every detail to the 30, which this company has been producing for several years past.

Once-Over Tiller

The Once-Over Tiller is a new power farm implement that prepares the seed bed in one operation. It combines a tractor with a pair of plow bottoms, and a pair of revolving pulverizers, one at the side of each plow. This tool will sell for about \$2750 and is manufactured by the Once-Over Tiller Corp., Minneapolis. It has two front driving wheels and one rear trailing wheel. The engine is a Stearns, four cylinder, 4½ x 6-in., and it is equipped with Stromberg carbureter and Splitdorf magneto with impulse starter. The gearset is of the company's own design and manufacture, and provides forward speeds of 1¼, 2½ and 4 m.p.h., the intermediate being the plowing speed. The final drive is through internal gears. All gears are enclosed and run in oil. The differential may be locked if desired. The tiller knives are rotated by the engine through a separate clutch and a pair of universals. Steering is by rack and pinion mechanism, and the driver's seat and controls are mounted on the tube extending back from the steering yoke. For sharp turns, the operator can make the rear wheel a castor by pulling a trip, and then applying the brake to the front wheel on the side to which he desires to turn.

New Ohio Tractor

The Ohio is a Columbus product of 15-30 h.p. rating, which sells at \$2800. It has a 4-cylinder, 4½ x 6-in. Wisconsin engine. The gearset gives three speeds of 1¼, 2½ and 5 m.p.h., the intermediate being the plowing speed. Power is transmitted through a worm on the rear axle and thence through internal gears which are pressed into the hubs of the rear wheels. Eisemann magneto, Schebler carbureter and Bennett air cleaner are standard equipment. The weight is 4950 lb.

Bests Come East

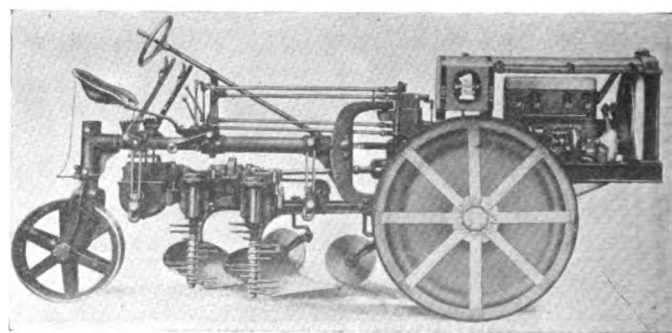
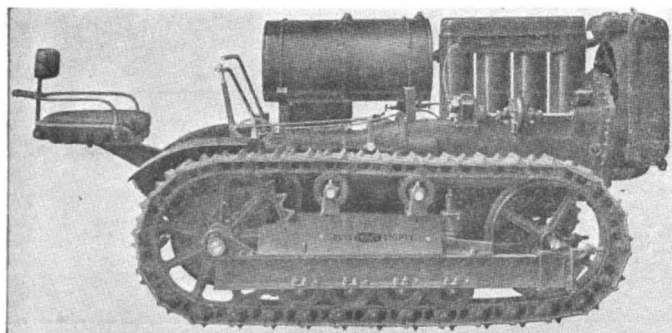
The Best tracklayers made their initial appearance at an Eastern show at Columbus. In addition to the 60 h.p. model, a new 30 h.p. job, with a 4-plow rating and selling for \$3250 was shown. This is a very modern looking type of tractor, and looks to be well designed and constructed. Engine, clutch housing and transmission are bolted together into one unit which is spring supported on the tracklayer frame not far from the center of gravity. The engine is a Best, 4-cylinder, valve-in-head type, with individual cylinders and single removable-head casting. The cylinder dimensions are 4¼ x 6½ in. An enclosed centrifugal governor holds the engine speed at 800 r.p.m. Steering is effected by applying power to one track only by means of a large multiple disk clutch operated by long levers extending transversely across the frame. The ground pressure is 5.2 lb. per sq. in. An upholstered seat with spring-supported back rest is a feature of this machine. The weight is 7400 lb.

Other new tractors exhibited were the 6-12 h.p. LaCrosse with line control, and a 15-25 h.p. Farquhar, which is assembled of standard units.

New Case Truck

A new truck was exhibited by the J. I. Case Plow Works. This is a 2-ton job designed for farm use, and is priced at \$3000. The power plant is identical with that used in the Wallis tractor with the exception that the water pump is moved to the right side of the engine. The cylinder dimensions are 4¼ x 5½ in., and the engine has a normal speed of 900. The Twin Disk clutch and 3-speed gearset are mounted as a unit with the engine. The steering gear is a Ross, and the springs are half-elliptic all-round. The Hotchkiss drive is used. The gasoline tank, which has a capacity of 20 gal., is mounted on the dash. Goodyear cord tires are standard equipment, the sizes being 36 x 6-in. front, and 38 x 7-in. rear. Other standard features are stake body, cab, towing hooks front and rear, electric lighting and power tire pump. A power take-off, which is mounted on the front of the engine, is furnished for \$150 additional.

Newcomers in the Tracklayers and Wheel Type



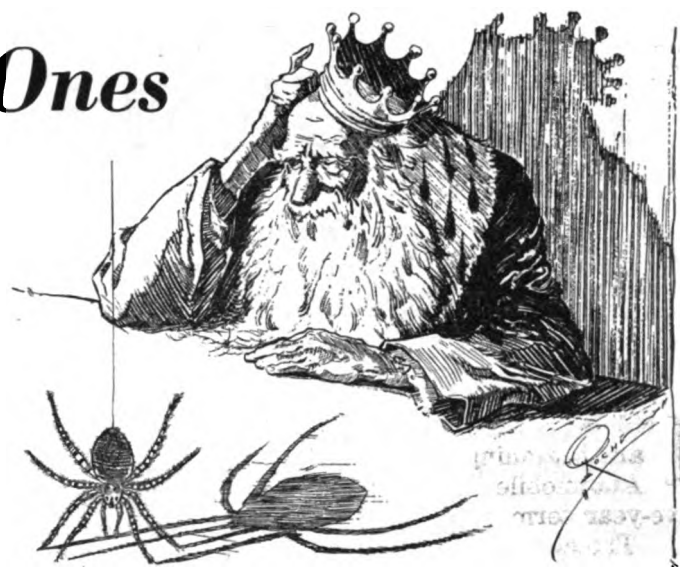
On the left is the new Best 30. This tracklayer appears to be both well-designed and carefully constructed. The Once-Over Tiller on the right is a three-wheel type. The cultivating knives mounted to the right of each plow are said to completely prepare the seed bed in one operation—hence the name

Four Little Wise Ones

Said King Solomon:

Proverbs, XXX; 24-28

- 24—There be four things which are little upon the earth, but they are exceeding wise:
 25—*The ants are people not strong, yet they prepare their meat in the summer;*
 26—*The conies are but a feeble folk, yet make they their houses in the rocks;*
 27—*The locusts have no king, yet go they forth all of them by bands;*
 28—The spider taketh hold with her hands, and is in kings' palaces.



By RAY W. SHERMAN

AND now for the last bug," said Tommy Trumbull, and it was some relief to Tommy, himself. The bug story sounded fine when he began, but he began to feel that he had stepped somewhat outside the automotive field in his biological dissertation.

Tommy, be it known, in addressing a show-time meeting of Reilly's Sennett dealers, had sought to repeat to them the gist of a sermon on the proverbs of Solomon and at the same time apply the proverbs to the automobile business. It must be admitted that he held his audience, but that may have been because he had somewhat to do with Reilly's wholesale business.

From the proverb of the ants, to the proverb of the conies, and then the locusts, he had arrived at the proverb of the spider, the fourth of the aged monarch's four little wise ones.

"The spider," Tommy explained, "also has something we all can learn. According to the Book, she takes hold with her hands and is in the palaces of kings. Now, that may not mean much, but there's a big lesson in it, and the lesson is that if a man takes hold with his hands as though he meant it he can get almost anywhere he wants to go.

"The trouble with a lot of you fellows is that you live in a rut. You think that success is surrounded with mystery. You go to the office in the morning, waste the first hour in wondering what you're going to do all day, and at night you go home without having accomplished much of anything. Not ONCE during the day have you TAKEN HOLD WITH YOUR HANDS, not once have you planned what would be a real intelligent move for your business, not once have you TAKEN YOURSELF BY THE NAPE OF THE NECK and yanked yourself into real forward activity. You've done the same old thing over and over again—and then you wonder why you don't get anywhere.

"Probably a lot of you men have salesrooms that need cleaning up, your windows may need washing, you may need

to fix up the accessory department, the stock may need checking over, the shop may need a general scrubbing and cleaning, and yet, knowing these things, you don't TAKE HOLD WITH YOUR HANDS, and DO THINGS.

"Maybe you have said to yourself that you're going to get some accounting and cost methods into your business, perhaps you intend to investigate your insurance, maybe you're going to frame up some letters to collect a lot of unpaid bills, it is possible you have considered a sales campaign that will put some money in the cash register, and yet I KNOW that morning after morning you come down and DON'T DO the things you KNOW YOU OUGHT TO DO. You haven't TAKEN HOLD WITH YOUR HANDS.

"There's one man in this room, however, who finally got the big idea one day and took hold with his hands. He had a little garage with a front end that looked like what some folks mean when they tilt their noses and say 'garage.' It was dirty. His few mechanics sat in folks' cars in their dirty overalls. His bookkeeping system was a mystery and a mess. He never made any money. And then one day he waked up and TOOK HOLD WITH HIS HANDS.

"He hired an accountant to go over his business, and the accountant showed him that all the money he was making in other parts of his business was being lost in the shop. He went at it. He forgot everything else and made a study of his shop. He found there was lost motion, no system, no adequate records, too low charges, loss in materials and tools and ever so many leaks. He checked the leaks, raised the rates, let some of the poor men go and hired some good ones.

"Next, he put in an accessory department with the assistance of a good jobber's salesman. He nursed it along, worked at it and got it to the point where it made money. He knew there was a lot he could learn about selling accessories, so he studied the thing from

No. 4—the spider

every possible angle. Then he trained the office girl to sell accessories and made her manager of that department.

"Then he got a chance to hire a vacant store next door, and he made it into a salesroom and got the Sennett agency. He came in here one day and said he wanted us to teach him to sell cars—and make money at it. And did we? I'll say we fell on his neck with joy to find a man who would come in here and plead with us to teach him to sell cars. We did everything we could for him, and he's selling cars to-day and making money at it. He hasn't any used car problem or anything else of the kind. He can take his statement to the bank and borrow money, and he's a real, all around business executive. Some day he'll be a bigger success than he is now.

"That's TAKING HOLD WITH YOUR HANDS, fellows! There isn't a man here who doesn't know of some things he OUGHT TO DO to make his business better, yet you DON'T DO THEM. And why? If you can answer why you can answer the question why there are so many very average people in the world and so very few who are real successes. There isn't much to success, boys, except TAKING HOLD WITH YOUR HANDS.

"And the time has come when real two-fisted hand holds are necessary if your grip is going to amount to anything. You can hang on with one hand in a weak sort of way but if you want to be in kings' palaces in this business you've got to TAKE HOLD WITH YOUR HANDS and shake 'em dead."

In the rush of adjournment there was the usual buzz, in which Tommy did not hear one dealer say to another:

"That's a great talk, wasn't it. But Solomon didn't say those things."

"No? Who did?"

"Ben Franklin, of course. I read it in the Third Reader."

THE DEALER CONTRACT

One Passenger Car Manufacturer Is Offering His Distributors Automatic Renewal for a Five-Year Period if They Live Up to Requirements for Increasing Distribution.

INSTEAD of the automatically expiring contract of a year's duration, some automotive manufacturers are beginning to think about a more substantial relationship with their dealers. At least one, the Comet Automobile Co., has offered its organization a contract which extends itself in yearly periods over a five-year term if the merchandiser lives up to a sliding scale of increased distribution.

The agreement, in the form of a rider to the regular contract and which already has been signed by some of the Comet distributors, is described in the following letter to Motor World from G. Vernon Beck, sales director of the company:

"**W**E have been giving this matter of the contract considerable thought, and are enclosing to you herewith a copy of a tentative five-year rider, which we have submitted to some of our distributors for their consideration, and to date it has been favorably received.

"We believe that adoption of this rider will bring closer relationship between the manufacturer and the distributor, and this we had in mind when we first considered the five-year rider.

"As you will note, the whole key to the situation is the first year's agreement. If the distributor fulfills his part of the first year's agreement, it is then automatically extended for the second year. If he fulfills his agreement for the second year, it is then automatically extended for the third year, and so on. For example, should we contract with a distributor for 200 cars the first year and he fulfills his part of the agreement by taking and paying for 200 cars, he will then, under the terms of his contract, agree to take 75 per cent more cars the second year, or an amount equal to 350 cars. If during the second period or second year, he purchases and pays for 350 cars, his contract is automatically extended for the third year upon an increased basis of 50 per cent more cars, which would be 175 cars additional, or a total of 525 cars for the third year. Upon satisfactory performance and fulfillment of terms of contract for the third year, the contract will then be automatically extended for the fourth year, with the understanding there shall be another 50 per cent increase over and above the third year, amounting to 263 cars, making a total of 788 cars for the fourth year. Upon performance and

fulfilment of his contract during the fourth year, contract will be automatically extended to the fifth year on a 25 per cent increased basis over and

to whom it has thus far been submitted."

The rider itself is worded as follows:

"Rider to contract dated _____ 19—, between Comet Automobile Company of Decatur, Illinois, first party, and _____, second party, which when signed by both parties shall become a part of said contract and all provisions shall be binding upon both parties.

"First party agrees, subject to the provisions herein, that if second party purchases or causes to be purchased and paid for as many or more Comet Passengers Cars as is scheduled in Section 8 of the contract herein referred to during the time specified that said contract shall be automatically extended until the 31st day of July, 1922, provided that the second party shall obligate itself to purchase or cause to be purchased and paid for during said extension term of one year 75 per cent more cars than is purchased and paid for during the first period of contract hereunder.

"If the second party shall purchase or cause to be purchased and paid for 75 per cent more cars the second year than is purchased and paid for up to July 31, 1921, then said contract shall be automatically extended another or the third year, provided second party shall obligate itself to purchase or cause to be purchased and paid for during said extension term of one year 50 per cent more cars than was purchased and paid for during the second year of contract hereunder.

"If the second party shall purchase or cause to be purchased and paid for during the third year 50 per cent more cars than is purchased and paid for during the second year, then said con-

What Do You Think About the Dealer Contract?

WITH this issue Motor World prints the fourth of a series of articles on the dealer contract, and more are to follow, giving the views of manufacturers and merchants.

Following the introductory article by Ray Sherman, in the Jan. 19 issue, there have appeared the opinions of a Canadian distributor of American cars (Jan. 26) and a critical analysis of a typical dealer contract by an American distributor (Feb. 2).

If you haven't read the first three articles, turn back to them.

Then, if you wish, let us have your own opinion.

above the fourth year, making a total of 988 cars for the fifth year.

"With the new era which is confronting the automobile industry at this time, we feel that there must be a closer relation existing between manufacturer and distributor than heretofore. With this in mind, and with the view of gaining the full confidence of our distributors, we are considering the adoption of this five-year rider, and which rider seems to meet with the approval of those distributors

tract shall be automatically extended another or the fourth year, provided second party shall obligate itself to purchase or cause to be purchased and paid for during said extension term of one year 50 per cent more cars than was purchased and paid for during

the third year of contract hereunder.

"If the second party shall purchase or cause to be purchased and paid for 50 per cent more cars the fourth year than is purchased and paid for the third year, then said contract shall be automatically extended until the 31st

day of July, 1925, or the fifth year, provided that the second party shall obligate itself to purchase or cause to be purchased and paid for 25 per cent more cars the fifth year than was purchased and paid for during the fourth year."

Demonstration—A Big Feature of This Used Car Selling Plan

A Story of How the Payne Motor Co., Minneapolis, Keeps the Used Car Moving

THIS is the five-part used car policy which is part of the plan of the Payne Motor Co., Paige distributor in Minneapolis, to meet present-day conditions in the industry:

Recondition them so that their performance will give satisfaction and build additional sales.

Price them for resale on a basis of cost, plus reconditioning expense, plus profit, put the prices on the cars and stand by them.

Display them in decent surroundings. Demonstrate them.

The company has given over its second floor, which formerly yielded a substantial rental revenue, to used car merchandising. This merchandising includes not only display of thoroughly reconditioned and handsomely painted and polished cars, but their demonstration on the floor of the used car salesroom itself.

This room, 150 by 139 ft., has rows of cars along three sides, those at the front facing the windows, with ample space for protection between. In the center, each facing an outside hall, are two rows of cars, and around these is a driveway on the concrete floor, where a salesman or prospect can put a car through its paces. There is plenty of room for turning and reversing and for hitting up a good road pace.

All the cars in the salesroom are tagged with a price. This is the price in case a trade for another used car is involved. If the prospect is going to buy for cash or its equivalent in acceptable paper, the salesman refers to the car by number on a record at the desk and quotes the "clean sale" price.

The Payne company finds attractive display necessary to successful operation of its policy of making a profit on the used car as well as the new. And the demonstration idea is proving popular, not only in attracting prospects but in convincing them of the truth of salesmen's statements about the reconditioning of the cars.

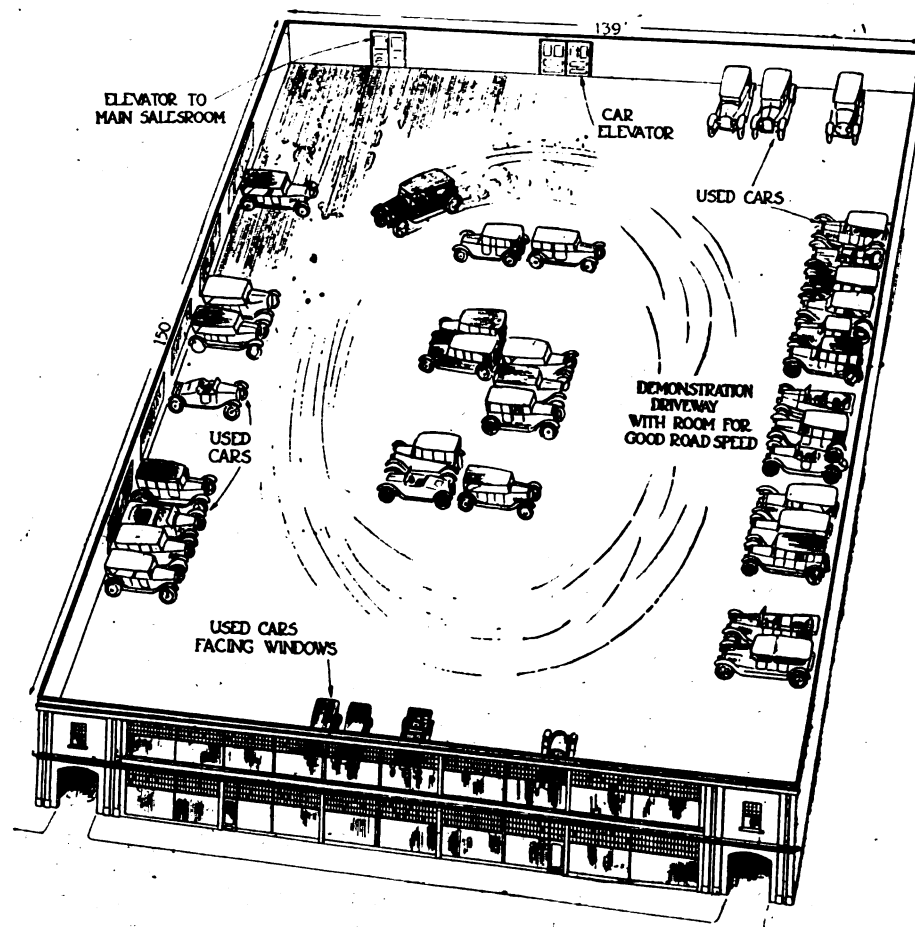
The Payne plan is to appraise a car offered in trade, estimate the cost of reconditioning and the re-sale price and then to make an allowance which will cover reconditioning and a profit. Other-

wise the trade is declined. On acceptance, the car goes to the shop, is overhauled, is equipped with new parts or accessories where necessary, painted and then put on the floor of the used car salesroom. Here Paige cars are grouped and others are placed according to comparative values. The entire stock is pol-

ished and inspected daily, and is always ready for the appearance of prospective buyers.

Inasmuch as two-thirds the average dealer's business in Minneapolis involves trades the Payne used car department is regarded as one of the most important in the company, and is so treated.

Here's a Novel Used Car Salesroom



Effective display and a demonstration driveway are strong features in the used car salesroom of the Payne Motor Co., Paige distributor in Minneapolis. Inasmuch as two-thirds of the average dealer's business in Minneapolis involves trade-ins, the used car department is an important part of the business

Editorial Observation

What About the Territory Man?

CONSIDER the manufacturer's territory man. If we are to believe some distributors and dealers, he toils not, neither does he spin—anything except yarns. But the traveler we shall always have with us, most likely, and if we can't make him better we ought to strive to make the best of him.

In the National Automobile Dealers Association meeting in Chicago there were some complaints against the inefficiency and arbitrariness of the territory man, but he had some defenders, too. It was pointed out that some of our leading manufacturers, sales managers, distributors and dealers have come from the ranks of the travelers and there was a suggestion that an honest attempt on the part of dealers to get on with these representatives of the factory would result more profitably for everybody concerned than antagonistic tactics.

It is well to remember that the traveler, first, is a human being. Then he is a traveler, in fact as well as in name. We know one whose headquarters, seventeen nights in every month, is in a Pullman berth, and probably his case is not a rare one. You would hardly expect him always to look fresh as a rose and cheerful as a nephew when the lawyer is reading the will of a rich uncle—but he usually does. And we know a lot of territory men just about like him. Some of these men have done excellent work since last spring

in making bankers see the justice of the industry's demand for financial support. Some of them have helped dealers, particularly in small towns, to institute or improve accounting systems. Some of them, on the other hand, have shown little real business ability and a good deal of ignorance or unfairness in handling the dealer's relations with the factory. On the whole, however, the human race is a pretty decent sort and the automobile district man is just about like the rest of the race. And nearly every man who tries to get along with his fellows succeeds fairly well.

At the N. A. D. A. meeting there were suggested three ways to handle the traveler. First, give him the benefit of the doubt, make him welcome when he calls and try your hardest to co-operate with him in the work which he has to do. You will usually succeed. If this doesn't work and you are convinced that the traveler is injuring your business and your relations with the factory, lay the facts before the manufacturer and ask that justice be done. If you are still victimized take the case to your dealer association and you will find it possible, in the majority of cases, to bring pressure to bear which will remove the cause of complaint.

The industry is going to live and grow on co-operation. And the traveler must be one of the co-operators.

Does Your Service Satisfy?

WITH the automobile registration so high in many states that finding a non-owner prospect is getting to be an event, the dealer's principal problem is becoming more and more one of holding rather than getting customers. It goes without saying that right service is the best means of holding trade. It is a pretty good time for dealers to find out if their service is right—and the way to find out is to ask the men and women who are buying it.

Some dealers make a practice of sending out after every service job letters inquiring as to the customer's satisfaction. Some dealers do this periodically. Some who have never followed the practice have initiated it within the past few months and have learned things which have prompted complete reorganizations of their service departments.

It would seem that every dealer should have some method of checking methodically the effects of his service work. Without it cases of minor dissatisfaction may develop into lost patronage affecting not only service revenue but the sale of new cars and trucks. There are letter and return postcard forms for this sort of contact with the customer which do not entail heavy initial or upkeep cost and which will pay for themselves many times over in returns from satisfied patrons.

Before the spring rush comes on the wise dealer will see that his service is right and take steps to insure its staying right.

Some dealers and some association secretaries still call it the automobile "game," presumably because it still is—to them.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Should Get Insurance

Editor Motor World: We have been a subscriber for Motor World for several years and have read your Law section with great interest. We have a matter that we would like to have your opinion on. It is this: Last Spring we sold an automobile to a party whom we will call X. We took title notes for same and had our contract signed, a copy of which we are enclosing. You will note the clause in same relating to insurance, both fire and theft. We did not have the party X take out any insurance nor did we take out any ourselves at our expense, in fact we have been rather loose with such matters. However, this Fall when party X's notes became due and he could not pay the same, we requested that he take out fire insurance to cover us in the matter. He requested us to go ahead and take out the insurance and have a bill rendered to him for the same, which we did, and on one of our trips out to see this party in regard to a cash payment we had him give us a check to cover the premium of the insurance on the car which we turned over to the local agent of the insurance company, so he got same paid all right. The policy was of date of Nov. 27. On Dec. 16 he called us over the phone and notified us that the car had burned up. We in turn notified the local agent from whom we had purchased the policy and he stated that he would in turn notify his company, which is a good one. In a few days a party dropped in our place whom we thought was the insurance adjuster and wanted to know if we had a policy on such and such a car belonging to party X. We told him that we did and that same was for \$800 and dated Nov. 27, 1920. He said that was all that he wanted to know as he represented another insurance company whose agent had issued a policy on the same car in a nearby town; in fact, party X lives half way between our town and this other town. It developed that he went over to this other town and took out a policy for \$700 and put it up with a bank there for collateral for some money he owed this bank. This policy was dated Dec. 14, 1920. This other insurance adjuster stated that their policy was voided on two counts: namely, that our policy was of prior date and that he had not stated in the other policy that we held title notes against the same. Now the company in which we were carrying our policy has turned us down on the ground that this other insurance would void their policy. We should

have stated to you in the first place that the insurance taken out was made out to party X with the "loss payable" clause made out to us, this being the way the local agent said that it would be best in the case of a fire. There is only one thing in our insurance policy relating to other insurance and it is this: No recovery shall be had under this policy if at the time a loss occurs there be any other insurance covering such loss, which would attach if this insurance had been affected.

This other insurance adjuster stated that he had been out and investigated the loss and that the fire looked legitimate to him and that he thought that he would have had to pay the loss till he heard about this other insurance.

We have been advised by our attorney that we can collect this policy, as since the loss payable clause had been placed on the policy this party X could not void same as to the amount stated, and had party X set fire to this car and burned same they would have to pay us and then prosecute him for arson. He notified us to go ahead and give the 60-day notice which the policy sets out that shall be given. There were no misrepresentations in our application for this insurance, nor was there any in this notice to the insurance company, as we made him state about this other policy, giving the name of the company, date, amount, etc. We will be glad to have your opinion on this matter as we intend to sue on same when this 60-day notice runs out.

Car sold for \$1035, \$335 was paid cash, balance deferred payments with interest. Car was in good condition, not having been used much. He had extra tire on same, also bumper which was purchased later.—T. M. B. & Son, Pulaski, Tenn.

Answer—Follow the advice of your attorney. If the facts are as you state them to be, the advice given you is good advice and should be followed. I do not believe any court will hold this policy void in view of the "payable as interest may appear" clause.

Doesn't Need License

Editor Motor World: We are contemplating selling used cars and would be pleased to have you inform us if it is necessary to be licensed. If so, what is the fee and the necessary steps to obtain it?—G. Bros., Rockaway Beach, N. Y.

Answer—Go ahead and sell them if you can. You don't need a license unless you intend to run a junk shop.

May Have to Stand Loss

Editor Motor World: I am a dealer in the City of Olean, N. Y., selling trucks, tires, etc. Last September I sold a 3½-ton truck equipped with a tank body with a capacity of 1000 gallons, for handling gasoline. The buyer planned to build and use his own garage, but did not figure right as the truck was so much larger than he thought, his building would not hold it, so appealed to me to help him out. I do not make a business of general garage work or storage, but as he was in a pinch I agreed to let him keep the truck in my store for a time, first telling him that he might put it in one corner. He said, however, this would not do, as it would be necessary to have it placed so that it would be available at any and all times. I then said, "In that case I must have the privilege of moving it out and in and about as the need for doing so may arise." He replied, "We grant you this privilege, move it when and where you need to."

At first this arrangement for storage was only temporary and I supposed that eventually he would make some other arrangement and get storage elsewhere. This, however, he did not do and I finally told him I would let it remain in my store for the winter at a charge of ten dollars a month. One day about a month ago it became necessary for one of my men to move this truck and in doing so he bumped into one of my trucks standing near a front window, pushing it ahead just enough to break the large plate glass. It cost \$134 to replace the glass and it looks to me as though this owner should make this good, or that the company he is insured with should do so, as he carries liability insurance on truck.

If you will kindly give me the benefit of your good judgment in the matter, I shall, as before stated, appreciate it very much.—M. F. R., Olean, N. Y.

Answer—I do not think you have a chance in the world of ever collecting anything. Do not let this prevent you from trying, however, as sometimes people do pay claims which they are under no legal obligation to pay. The unfortunate part of this incident is that the negligence of your servant caused the damage, and you are just as much responsible for the negligence of your employee as if you personally had been negligently pushing the truck around yourself. Plate glass insurance has just been reduced 25 per cent. If I were you I would take some out.

A Department of BETTER MECHANICS

Conducted by J. HOWARD FILE

No. 179

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Time Estimates and Classified Operations on Paige Cars

AFTER carefully considering all the factors involved, the Factory Service Department of the Paige-Detroit Motor Car Co. has worked out a chart giving the most convenient classification of repair operations and an average time estimate of each. It will be found that while some mechanics can perform most of the work in less time, others will take considerably longer, but the figures submitted are a fair average over most of the time.

Chart of Time Estimates of Repair Operations on Paige Cars

Operation No.	Operation	Models 6-38 and 6-39	Model 6-42	Models 6-46 6-51 6-55	Operation No.	Operation	Models 6-38 and 6-39	Model 6-42	Models 6-46 6-51 6-55
Motor Combined Operations					Pistons, Rings, Connecting Rods, etc.				
100	Tune motor, including cleaning and spacing of plugs, cleaning breaker points, adjusting carburetor and adjusting tappets.....	1.30	2.00	1.30	130	Remove oil pan, clean and replace..	1.30	1.00	1.00
101	Remove carbon and tune motor....	3.30	3.30	1.30	110	Remove cylinder block and replace..	.....	.....	5.00
102	Remove carbon, grind valves and tune motor.....	7.00	7.00	7.00	113	Remove cylinder head and replace..	1.30	1.30	.....
103	Clean motor.....	.30	.30	.30	131	Remove and replace one connecting rod and piston assembly.....	.30 ³	.30 ³	.30 ³
104	Clean and paint motor.....	2.00	2.00	2.00	132	Remove and replace all connecting rod and piston assemblies.....	2.00 ³	2.00 ³	2.00 ³
105	Overhaul motor—serviceable.....	32.00	32.00	35.00	133	Install one new piston.....	.30 ⁴	.30 ⁴	.30 ⁴
106	Overhaul motor—excellent.....	65.00	65.00	70.00	134	Install one new piston and lap or re-bore cylinder.....	1.30 ⁵	1.30 ⁵	1.30 ⁶
Cylinders					135	Install all new pistons.....	3.00 ⁷	3.00 ⁷	3.00 ⁷
110	Remove cylinder block and replace..	.....	.....	5.00	136	Install all new pistons and lap or re-bore cylinders.....	9.00 ⁸	9.00 ⁸	9.00 ⁸
111	Install new cylinder block, including scraping of main bearings on small motors.....	50.00	50.00	15.00	137	Install rings on one cylinder.....	.30 ⁹	.30 ⁹	.30 ⁹
112	Tighten base nuts of cylinders.....	.....	.....	.45	138	Install rings in all cylinders.....	3.00 ¹⁰	3.00 ¹⁰	3.00 ⁷
113	Remove cylinder head and replace..	1.30	1.30	.....	139	Install one new piston pin.....	.30 ⁴	.30 ⁴	.30 ⁴
114	Remove carbon by hand scraping....	2.30 ²	2.30 ²	.....	140	Install one new piston pin and bushings.....	1.00 ⁴	1.00 ⁴	1.00 ⁴
115	Burning carbon by oxygen, 50 cents per cylinder.....	.....	.....	3.00	141	Install all new piston pins.....	3.00 ⁷	3.00 ⁷	3.00 ⁷
Valves and Tappets					142	Install all new piston pins and bushings.....	5.00 ⁷	5.00 ⁷	5.00 ⁷
120	Install one new valve, including grinding.....	2.30 ³	2.30 ³	1.15	143	Adjust one connecting rod bearing..	.30 ³	.30 ³	.30 ³
121	Install all new valves including grinding.....	6.00 ⁴	6.00	6.00	144	Adjust all connecting rod bearings..	3.00 ³	3.00 ³	3.00 ³
122	Install one new spring.....	1.45 ⁴	1.45 ³	.30	145	Refit all connecting rod bearings...	5.30 ⁷	5.30 ⁷	5.30 ⁷
123	Install all new springs.....	2.30 ²	2.30 ²	2.00	146	Install one new connecting rod bearing.....	2.00 ⁴	2.00 ⁴	2.00 ⁴
124	Install one new tappet.....	1.15	1.00	.45	147	Install all new connecting rod bearings.....	10.30 ⁷	10.30 ⁷	10.30 ⁷
125	Install all new tappets.....	3.00	2.30	3.00	148	Realign all connecting rods.....	2.30 ⁷	2.30 ⁷	2.30 ⁷
126	Adjust all tappets.....	.30	.30	.30	149	Adjust rear main bearing.....	1.00 ³	1.00 ³	1.30 ³
127	Check timing of valves.....	.15	.15	.15	150	Adjust center main bearing.....	.30 ³	.30 ³	.30 ³
					151	Adjust front main bearing.....	1.00 ³	1.00 ³	3.00 ¹¹
					152	Adjust all main bearings.....	2.30 ³	2.30 ³	5.00 ¹¹
					153	Install all new main bearings.....	40.00 ¹³	40.00 ¹³	40.00 ¹³
					154	Adjust all main connecting rod bearings.....	5.30 ³	5.30 ³	8.00 ¹¹
					Camshaft, Timing Gears, etc.				
					160	Remove and replace radiator and hood.....	1.00	1.00	1.00
					161	Remove and replace motor support bolts.....	.30	.30	.30

1—Cost of burning carbon at 50 cents per cylinder.

2—Includes time for operation 113.

3—Time for operation 130 not included.

4—Time for operations 130 and 131 not included.

5—Time for operations 113, 130 and 131 not included.

6—Time for operations 110, 130 and 131 not included.

7—Time for operations 130 and 132 not included.

8—Time for operations 113, 130 and 132 not included.

9—Time for operations 110, 130 and 132 not included.

10—Time for operation 113, 130 and 132 not included.

11—Time for operations 130, 160 and 162 not included.

12—Time for removal and replacement of motor included.

13—Time for operations 160 and 161 not included.

Operation No.	Operation	Models 6-38 and 6-39	Model 6-42	Models 6-46 6-51 6-55	Operation No.	Operation	Models 6-38 and 6-39	Model 6-42	Models 6-46 6-51 6-55
162	Remove and replace timing gear cover	.30 ¹³	.30 ¹³	.30 ¹³	428	Realign generator	1.00	1.00	1.00
163	Install one new timing gear	.30 ¹¹	.30 ¹¹	.30 ¹¹	429	Repairs to generator coupling	2.00	2.00	2.00
164	Install all new timing gears	1.30 ¹¹	1.30 ¹¹	1.30 ¹¹	Starting Motor and Switch				
165	Remove end play in camshaft	8.00 ¹³	.30 ¹³	.30 ¹³	450	Remove and replace starting motor	1.30	1.00	1.30
166	Remove end play in crankshaft	.45 ¹³	.45 ¹³	.45 ¹³	451	Overhaul starting motor	3.30 ¹⁷	3.30 ¹⁷	3.30 ¹⁷
167	Remove end play in pumpshaft	.45 ¹³	.45 ¹³	.45 ¹³	452	Install new brushes in starting motor	1.00 ¹⁷	1.00 ¹⁷	1.00 ¹⁷
168	Install new camshaft	10.00 ¹³	6.00	5.00 ¹⁷	453	Clean commutator and brushes	.30 ¹⁷	.30 ¹⁷	.30 ¹⁷
169	Install all new camshaft bearings	25.00 ¹³	25.00 ¹³	25.00 ¹³	454	Repair Bendix drive	1.00 ¹⁷	1.00 ¹⁷	1.00 ¹⁷
170	Replace starting crank	3.00	3.00	3.00	455	Remove and replace starting switch	1.00	.30	2.00 ¹⁰
					456	Overhaul starting switch	1.00 ¹⁸	1.00 ¹⁸	1.00 ¹⁸
Cooling System					Battery				
180	Remove and replace radiator	1.00	1.00	1.00	475	Remove and replace battery	.30	.30	.30
181	Install new radiator hose—upper	.15	.15	.15	476	Test battery	.15	.15	.15
182	Install new radiator hose—lower	1.30	1.30	1.30	Lamps and Horn				
183	Install new water pump complete	3.30	3.30	5.00	480	Install new bulbs	.15	.15	.15
184	Overhaul water pump	2.00 ¹⁹	2.00 ¹⁹	2.00 ¹⁹	481	Install new glass in head lamps	.15	.15	.15
185	Install new water pump shaft	5.00	5.00	7.00	482	Adjust and focus head lamps	.30	.30	.30
186	Install new water pump shaft bearing	.30 ¹⁰	.30 ¹⁰	.900	483	Install new tail lamps	.15	.15	.15
187	Repack water pump gland nuts	1.00	1.00	1.00	484	Install new horn	.30	.30	.30
188	Adjust fan bearings	.30	.30	.30	485	Overhaul horn	1.30	1.30	1.30
189	Install new fan bearings	1.30	1.30	1.30	486	Adjust horn for tone	.30	.30	.30
190	Install complete new fan	1.30	1.30	1.30	Ammeter				
190	Adjust or replace fan belt	.15	.15	.15	490	Remove and replace ammeter	.30	.30	.30
Lubricating System					Clutch				
130	Remove oil pan, clean and replace	1.30	1.00	1.00	500	Overhaul clutch (Borg & Beck)	.31	5.00	.31
200	Overhaul oil pump	1.30 ²¹	1.30 ²¹	.30	501	Adjust clutch (Borg & Beck)	.31	1.00	.31
201	Adjust oil pump pressure	.15 ²¹	.15 ²¹	2.30	502	Replace disks (Borg & Beck)	.31	3.00	.31
202	Install new oil pump	.45 ²¹	.45 ²¹	.30	503	Replace disks (Multiple disk type)	4.40 ²⁴		3.30
203	Install new oil pump pressure gage	.30	.30	.30	505	Adjust clutch pedal	.15	.15	.15
204	Repairs to oil lines	1.00 ²¹	1.00 ²¹	1.00 ²¹	506	Install new flywheel	7.30 ²⁴	6.00	6.00
205	Level oil pan and gage oil dips	3.30	3.30	1.30	Gearset				
Exhaust Manifold, Mufflers, etc.					600	Remove and replace gearset assembly	3.00 ^{25a}	3.00	3.00
250	Install new exhaust manifold flange nut	2.00	2.00	2.00	601	Overhaul gearset	3.30 ²⁵	3.30 ²⁵	3.30 ²⁵
251	Pack exhaust flange nut	.30	.30	.30	602	Install new main drive gear or bearing	.45 ²⁵	.45 ²⁵	.45 ²⁵
252	Remove and replace muffler	1.00	1.00	1.00	603	Install new sliding gears	1.15	1.14	1.15
253	Clean or repair muffler	1.00 ²²	1.00 ²²	1.00 ²²	604	Install new main shaft or rear bearing	2.15	1.15	1.15
Fuel Systems					605	Install new reverse idler gear or shaft	.45	.45	.45
300	Install new carbureter	1.00	1.00	1.00	606	Install new gearset case	4.00 ²⁵	4.00 ²⁵	4.00 ²⁵
301	Overhaul carbureter	1.30	1.30	3.00	607	Install new gearset shifter forks	1.15	1.15	1.15
302	Clean and adjust carbureter	.30 ²³	.30 ²³	.45 ²³	608	Install new gearset neutral lock	.31 ^{25a}	1.00	.31 ^{25b}
303	Install new vacuum tank		.45	.34	Propeller Shaft and Universal Joint				
304	Clean vacuum tank		.45	.34	650	Remove and replace propeller shaft	3.30	1.00	1.00
305	Remove and replace main supply tank	8.00	2.00	8.00 ²⁶	651	Remove and replace universal joints	3.30 ²⁶	1.00	1.00
306	Repairs to gasoline line	1.00	1.00	1.00	652	Repairs to universal joint—front	2.30 ²¹	1.00	1.30
Ignition System					653	Repairs to universal joint—rear		1.00	1.30 ²⁴
400	Clean and adjust spark plugs	1.30	1.30	1.30	654	Install new universal joint cover—front or rear		.45	1.00
401	Check or reset ignition timing	.15	.15	.15	655	Repack universal joint	.30	.30	.30
402	Install new distributor heads	.30	.30	.30	Rear Axle				
403	Clean and adjust breaker points	.15	.15	.15	700	Remove and replace complete rear axle assembly	7.00	5.00	7.00
404	Install new breaker points	1.00	.15	1.00	701	Overhaul rear axle complete	9.00 ²⁸	4.00 ²⁸	9.00 ²⁸
405	Install new coil	.30	.30	.30	702	Install new pinion shaft, bearings or pinion	5.00	2.00	5.00
406	Install new resistance unit in coil	.15	.15	.15	703	Remove and replace differential assembly	3.00	3.00	3.00
407	Install new condenser		1.30	.34	(Continued on page 25)				
408	Install new switch	1.00	1.00	1.00					
409	Repair switch	1.00	1.00	1.00					
Generator									
425	Remove and replace lighting generator	1.30	1.30	1.30					
426	Install new brushes in generator	1.00 ²⁹	1.00 ²⁹	1.00 ²⁹					
427	Clean commutator and brushes in generator	.30 ²⁹	.39 ²⁹	.30 ²⁹					

14—Ten hr. for model 6-39.
 15—Time for operations 160, 161 and 162 not included.
 16—12 hr. for model 6-39.
 17—5.30 hr. for model 6-55.
 18—Time for removal and replacement of motor included.
 19—Time for removal and replacement of pump not included.
 20—Time for operations 160 and 162 not included.
 21—Time for operation 130 not included.
 22—Time for operation 252 not included.
 23—Time for removal and replacement of carbureter not included.
 24—45 min. for Model 6-51 and 6-55.
 25—2 hr. for Model 6-51 and 6-55.
 26—30 min. for Model 6-55.
 27—Time for operation 450 not included.
 28—Time for operation 455 not included.
 29—Time for operation 425 not included.
 30—30 min. for model 6-51 and 6-55.

31—7.30 hr. for model 6-39.
 32—30 min. for model 6-39.
 33—5 hr. for model 6-39.
 34—3.30 hr. for model 6-39.
 35—8 hr. for model 6-39.
 36—5 hrs. for model 6-55.
 37—1 hr. for model 6-55.
 38—3 hrs. for model 6-55.
 38a—5 hrs. for model 6-39.
 39—Time for operation 600 not included.
 39a—1 hr. for model 6-39.
 39b—1 hr. for model 6-55.
 40—2.30 hrs. for model 6-39.
 41—1 hr. for model 6-39.
 42—2 hrs. for model 6-51, 6-55.
 43—Time for operation 700 not included.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

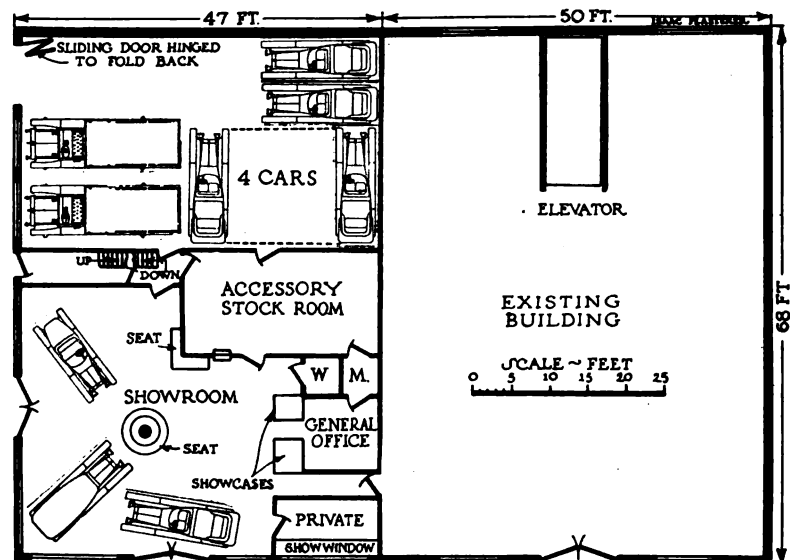
Apartments a Feature of This Building

*Upper Stories of New Building Laid Out in Apartments—
Service Department Will Use All of the Present Building*

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

THE placing of living apartments on the upper floors of dealer buildings is not uncommon, and in this particular instance, it is a desirable feature. It will be noticed from the plan that the corner building houses nothing but the sales department, and consequently their will be none of the noises, nor the fire risks that are associated with the garage. It would be a good idea in planning these upper floors to bear in mind that, in the future, it might become advisable to use the second and third stories for business purposes.



The entire first floor of the new building will be used by the sales department

The business of this dealer is at present housed in the two-story building shown in the lower left hand corner of this page. He plans to demolish the

building on the corner and also the small structure between it and his present building. In their place he will erect a three-story building, the two upper floors of which will be laid out in apartments. The first story will be almost entirely given over to his sales department. The service department will occupy both floors of his present building.

Reo cars and light trucks are sold by this dealer, and both will be displayed in the one showroom which occupies the corner. It will be noted that every possible inch of street frontage is made use of for display purposes. Even the window in the private office is arranged for display. By providing entrances on each street, instead of a single one on the corner, a splendid view of the cars in the showroom is obtained from both directions, and in obtaining this result convenience is not in anyway sacrificed. The corner entrance is to be avoided, as a rule, as this space is much more valuable for display.

The accessory stockroom is located at



The new building will take the place of the one shown in this illustration



How the corner will look when construction is finished. The corner location should prove to be a valuable asset to the sales department

the rear of the showroom, and no special space is provided for their sale. However, by placing showcases here and there around the showroom the various articles in stock can be adequately displayed. The show window in the private office is well adapted to the display of small articles.

The entrance in the center of the

front of the building is for the apartments on the upper floors. The entrance to the basement, which contains heating plant and space for stock storage, is partitioned off from this entrance.

The room on the far side of the entrance is essentially for the storage of new cars and trucks. This seems to be a rather wasteful use of space that is

really valuable from the sales standpoint. However, some of its value will be realized upon by providing it with show windows and keeping a couple of trucks on display as shown in the plan. It is our opinion that this space would pay a greater return if it were used exclusively by the sales department, or if leased as a store to some other merchant.

(Continued from page 23)

Operation No.	Operation	Models 6-38 and 6-39	Model 6-42	Models 6-46 6-51 6-55	Operation No.	Operation	Models 6-38 and 6-39	Model 6-42	Models 6-46 6-51 6-55
704	Overhaul differential assembly.....	1.30 ⁴⁴	1.30 ⁴⁴	1.30 ⁴⁴	781	Remove and replace reach rod.....	.45	.45	.45
705	Install new differential bearings.....	3.30	3.30	3.30	782	Adjust ball sockets in reach rod.....	.30	.30	.30
706	Install new ring gear and drive pinion.....	9.00	4.00	9.00	Frame, Fenders, Runningboard, Tire Carrier, etc.				
707	Install new differential carrier.....		4.00		800	Straighten frame front extension...	9.00	9.00	9.00
708	Adjust drive pinion for end play....	5.00	1.45	.30 ⁴⁶	801	Remove and replace one front tender.....	2.00	2.00	2.30
709	Adjust differentials for side play....	1.30	1.30	1.30	802	Remove and replace one rear tender.....	1.00	1.00	1.30
710	Install new truss rod.....	.30	.30	.30	803	Remove and replace one running-board.....	3.30	3.30	3.30
711	Change oil in rear axle.....	.30	.30	.30	804	Remove and replace tire carrier....	3.30	.30	3.30 ⁴⁷
Brakes					805	Remove and replace motor splash pan.....	1.00	1.00	1.00
725	Reline service brake bands and adjust.....	3.00	3.00	3.00	806	Remove and replace motor side pans.....	3.00	3.00	3.00
726	Adjust and equalize service brakes..	1.00	1.00	1.00	Springs				
727	Free-up service brakes, shafts, etc..	2.30	2.30	2.30	825	Remove and replace one front spring.....	2.30	2.30	3.00
728	Reline emergency brakes and adjust	2.00	2.00	2.00	826	Remove and replace one rear spring.	9.00	4.00	9.00
729	Adjust and equalize emergency brakes.....	.45	.45	.15	827	Install new front spring shackle bolts and bushings.....	3.00	3.00	3.30
730	Free-up emergency brakes, shafts, etc.....	2.30	2.30	2.30	828	Install new rear spring shackle bolts and bushings.....	10.00 ⁴⁸	6.00	8.00
731	Install new brake drum.....	2.30	2.30	2.30	829	Tighten all shackle bolts.....	1.00	1.00	1.00
732	Install new brake spider.....	3.00 ⁴⁵	3.00 ⁴⁵	3.00 ⁴⁵	Wheels				
Front Axle					850	Install one new front wheel.....	1.00	1.00	1.00
750	Install new I-Beam centre.....	4.00	4.00	4.00	851	Install one new front wheel hub....	2.30	2.30	2.30
751	Straighten I-Beam centre.....	6.00	6.00	6.00	852	Install one new front wheel bearing-inner.....	.45	.45	.45
752	Install new steering spindle.....	3.00	3.00	3.00	853	Install one new front wheel bearing-outer.....	.45	.45	.45
753	Install new king bolts.....	1.00	1.00	1.00	854	Install one new rear wheel.....	1.30	1.30	1.30
754	Install new king bolt bushings.....	2.30	2.30	2.30	855	Install one new rear wheel hub....	2.30	2.30	2.30
Steering Gear					856	Install rear wheel bearing.....	1.00	1.00	1.00
775	Remove and replace steering gear assembly.....	4.30	4.30	4.30	857	Adjust front wheel bearings.....	.15	.15	.15
776	Overhaul steering gear assembly complete.....	2.30 ⁴⁶	2.30 ⁴⁶	2.30 ⁴⁶	858	Realign front wheel.....	.30	.30	.30
777	Install new bushings throughout....	1.30 ⁴⁶	1.30 ⁴⁶	1.30 ⁴⁶					
778	Install new half nuts.....	1.30	1.30	1.30					
779	Adjust steering post for end play....	.15	.15	.15					
780	Remove and replace steering arm tie rod.....	.30	.30	.30					

⁴⁴—Time for operation 703 not included.
⁴⁵—5 hr. for model 6-51 and 6-55.

⁴⁶—Time for operation 775 not included.
⁴⁷—2 hr. for model 6-51 and 6-55.
⁴⁸—8 hrs. for model 6-39.

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Association Needed Here

The crying need of a local association to standardize and elevate business practice is undoubtedly shown in this letter from a California tire dealer.

Editor Motor World:—I have been a subscriber and reader of Motor World for some three years now and have as yet had nothing to say in your columns and was content to benefit by what the other fellow had to say, but there is a little information I would like to be in possession of and also to know how the other fellow handles like problems.

First let me say that my business is selling tires, tubes, and touching lightly upon other accessories, and in order that I make my full meaning plain to the reader, I must explain circumstances as they really exist. Much stress is put upon "SERVICE" by tire companies and automobile manufacturers as if a man is a good service man he naturally gets the business and that is what they are after. But what is the man going to do who delivers all the so-called service and inspection of tires, pumping up free, alignment work free, repair work guaranteed and all come-backs made good, when the man down the street from you does the same thing, has less than half the overhead expense, cuts the price of his repair work half less than living prices, sells tires at any price he can get for them just so he gets from fifty cents to one dollar per sale more than the tires cost him and makes free tire changes to get the tube and repair work?

What's To Be Done?

I bought a large quantity of repair materials before they soared to high prices about war times and fortified myself in order if it were possible to sell my labor and that of my hired help, without any advance during the high prices and while the public was pressed for money to buy Liberty bonds and pay the high prices of living articles and I succeeded in carrying the patrons over and never charging a cent higher prices for section work or tube repairs than we did before war time and our prices still remain the same. In other words the section price of a 3½ tire in California at all large towns and cities is from \$5 to \$5.25 and I have stayed with the price I started with five years ago, which was \$3 for that size. Now the opposition I speak of will get away with the same job with boots minus cushion stock for about \$1.50 and so on up the line with a price as shamefully low on other sizes and if

his work falls down he will make it good free of charge and they will stay with it because they get the tire changing free, the work done for nothing and the new tire for practically cost.

The other day a patron came in and wanted a tire sectioned and retreaded and I told him it was not worth it as the price of the job should be \$16 but I would do it for \$14 if he insisted on having it done and he said it was more than he cared to pay and at the same time he said the tire was too good to throw away. I then told him I would make him a proposition, if he would come back to me and report what he could get it done for, I would tell him where to take it and get it done for a song and I sent him to my opposition and he came back without the tire and reported that \$9 was all the fellow asked and he could afford to take that chance.

A \$16 Job for \$9

Now can you imagine a \$16 job of work being done for \$9?

What can a man do in the face of such things when after all I have done to tide our local people over the high prices and then have the like of those prices put before them which makes them think that I am a robber in the worst degree and never did do them a kindness? I have a nice place of business, spare no cost in material in the repair work we do, have a good plump rent to pay, a family to support together with house rent for that, hired help to pay, while the other fellow has no hired help to pay, low rent and no home expense as he lives with relatives.

The tire men have given him that "Spring scarcity" talk of tires, with the result that he is loaded to the ears with May tenth datings, I venture they are May tenth datings as I know he hasn't made enough money to cover such purchases, and the result of it all will be, that as he sees May tenth nearing and the tires are mostly unsold he will literally slaughter tire prices to meet his dating and thus cheat all of us from a great quantity of business that we are rightfully entitled to for we are most of us handling standard products on which we do not consider it good business policy to cut prices.

A man like that belittles the game and makes it appear that the other fellow is robbing them and no matter how much stress you put on the fact that your work is quality work, they figure that the difference in price is too great, and then they say, "he changes tires free, why don't you?"

For a place like my place to step down to his prices would mean only the complete ruination of the business in our town and that in a short time I would be broke and a man would be more than foolish to stoop to his level, but, I ask again, what can be done, what is the other fellow doing that faces just such a condition?

I am one of the most extensive road sign advertisers in the State, and in a State like California, where there are many tourists, it brings considerable patronage, and he realized that and conceived the idea that to imitate our name would also catch much strange trade that would not be very familiar with the name and take only passing notice; and when they reached town and noticed his sign on his place they would at once assume that it was the one the signs belonged to, as he calls his the Tire Shop and I call mine Vulcanizing Works.

I know of work sent me by friends from adjoining towns that the carrier made mistakes on account of the name and took same to him, so to overcome his robbery that way I was forced to put a trade mark sign beneath my road signs and put the trade mark in prominence in front of my place of business.

Would Have Customer's Signature

The second question I wish to ask is this:

What sort of paper can be drawn up that will resemble a pack of bank checks, or fastened together like the blanks we keep for patrons who do not carry check books, that we can use every time we sell a man a tire on 30 days or longer time, which will have printed on it the name of the owner (I mean space for his name with words to the effect that the car is in his own name or who ever the name is that he fills in), whether there is a lien on the car, and a few necessary things like that which would place him where the hands of the law could get upon him if he beat it off without paying you; for his name would be on the paper and he would hardly sign it unless he intended to pay?

For example, here of late I sold one party a tire. They had a truck and a touring car and I really thought them all O.K., but I learned soon that they were somewhat behind in several places in town; and soon they were after another tire. I at once threw good dollars after poor ones.

May I see this in print and let the other fellows use the "rubber hammer" on me?—Vulcanizing Works.

Repairshop Shortcuts

No. 2838—Replacing Buick Valve Cages—Buick valve cage packing nuts are easily started in place by using a piece of iron pipe the same size as the packing ring, placing this on top of the ring and tapping with a hammer. On all models from 1918, two sizes are needed, 1½ and 3 in. outside diameter.—L. C. Higbee, Higbee Buggy Co., Sheridan, Ind.

No. 2839—Pushrod Holder—When disassembling overhead valve engines, a holder for the pushrods will keep them from being damaged and will also keep each pushrod separate so that it can be put back where it belongs.—Edward Zioski, Grant Motor Sales Co., Pawtucket, R. I.

No. 2840—Jig to Straighten Ford Rear Axles—The jig is made by brazing a driveshaft housing to a rear wheel hub from which the flange has been ground. The wheel is removed, the high side chalked and the axle bent back to position.—Walter Crosby, Lalime & Partridge, Inc., Boston,

No. 2841—Valve Lock Holder—The holder, made of flat steel or brass, will handle valve locks in inaccessible places such as found on eight and twelve cylinder engines.—Howard M. Patterson, Los Angeles, Cal.

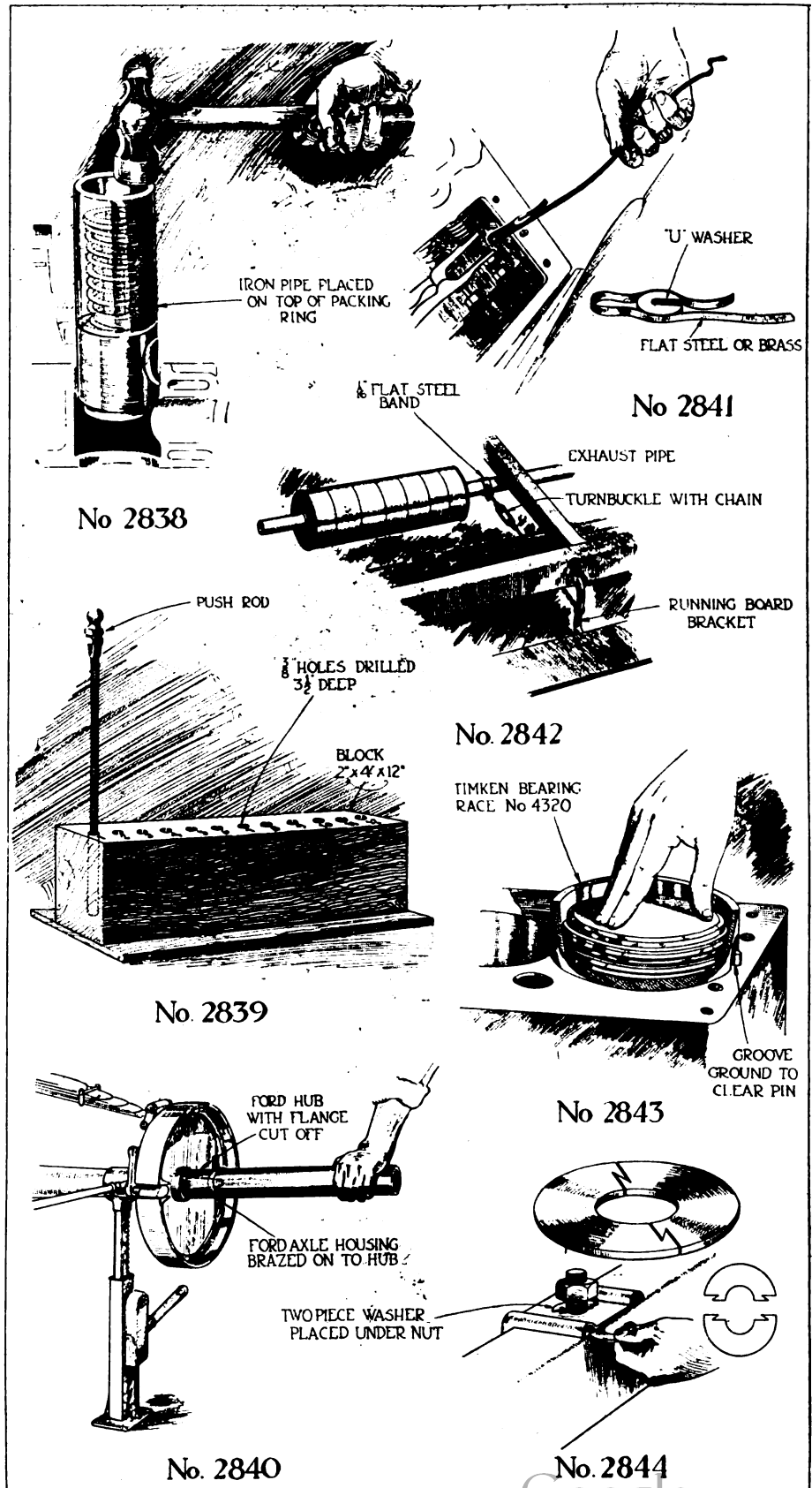
No. 2842—Exhaust Pipe Silencer—Where the exhaust pipe or muffler rattle, a hose clamp placed around the pipe is connected to a turnbuckle which is attached to the runningboard bracket. Tightening the turnbuckle will take the rattle out.—De Witt F. Rahn, Little Falls, N. Y.

No. 2843—Piston Ring Compressor for Oaklands—A Timken bearing race, No. 4320, makes a good squeezer for the piston rings on the 6-cylinder Oakland. It is necessary to grind a V in one side to clear the pin.—Ed Ruesch, Buffalo, N. Y.

No. 2844—Two-Piece Washer—The washer can be put on or taken off without removing the nut altogether. When the nut is set down, the washer cannot come off.—R. G. Dasse, Burlington, Vt.

MAKE A DOLLAR

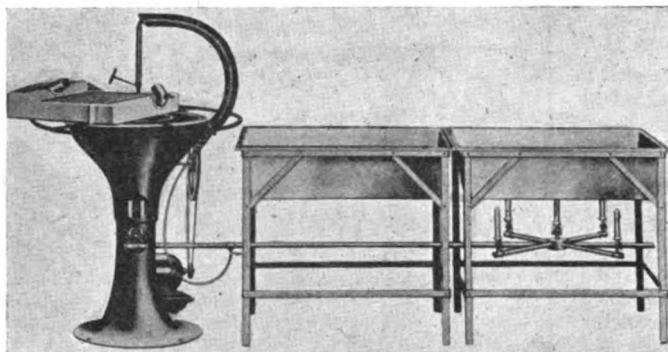
SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



Automotive Equipment

SCHULZ RADIATOR MACHINE

The apparatus consists of two tanks and a soldering machine. The first tank is used to boil an Oakite solution, and it is heated by Bunsen burners. The second tank contains water and is used for rinsing and testing for leaks. The soldering machine includes a melting bowl, two Bunsen burners, a pump to force the solder through the distributor pipe, and a 1½-h.p. motor to operate the pump. The standard motor operates on 110 volts, 60 cycles.—Automotive Radiator Machine Co., 628½ Central Avenue, Fort Dodge, Ia.



Schulz Radiator Machine

NOCEEM TUBES

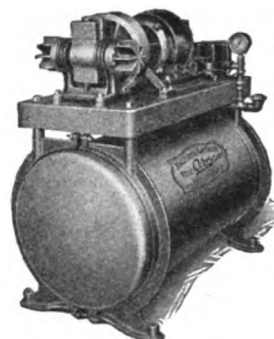
This is a corrugated seamless tube for cord tires. The valve is vulcanized into the tube and is reinforced with ring and base patch on the inside. The corrugations are intended to prevent freezing to the casing. They are cured in a circle and have an oval cross section. They are made of red rubber, and are warranted as to workmanship and material. Sizes range from 30 x 3½ in. up to 37 x 5 in. Each tube is packed in a sealed container.—NoCeem Rubber Co., Harrison, N. J.

MIRACLE BLOWOUT PATCH

This patch is made of rawhide covered with rubberized fabric. Two flaps which tighten over the beads hold the patch in place. Perforations in the flaps allow the patch to be tied in position to simplify the adjustment. After a few miles' service, the patch is said to slightly vulcanize itself to the shoe. The patches are packed in attractive containers. Rawhide Products Corp., 1834 Broadway, New York City.



Miracle Blowout Patch



Model F-14 Auto Compressor

MODEL F-14 AUTO COMPRESSOR

A fully equipped, automatic air compressor and tank. It has double opposed cylinders 1½-in. bore and 1-in. stroke, and provides 150 lb. pressure at 1150 r.p.m. The compressor is driven by an electric motor. The tank has a filtering device which removes oil and dirt. The complete line of compressor outfits manufactured by this company includes models for all classes of service.—Auto Compressor Co., Wilmington, O.

ONAN WRIST METER

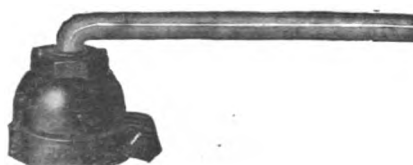
A small electric testing meter which attaches to the wrist like a wrist watch. It is protected from overload by an automatic circuit breaker. It also has a breaker with condenser for testing ignition circuits. Price, \$15.—David W. Onan, 43 Royalston Avenue, Minneapolis, Minn.



Onan Wrist Meter

HUMBOLDT ADJUSTABLE WHEEL PULLER

This device consists essentially of a malleable iron casting. Adjustable clamps are provided which prevent stripping of threads. It is finished in black enamel. Made in two styles, Nos. 390 and 391. Prices are \$1 and 75 cents respectively.—Republic Auto Parts Co., 81 Tenth Street, Long Island City, N. Y.



Humboldt Adjustable Wheel Puller



Steiner Wintometer

STEINER WINTOMETER

A hydrometer syringe used to determine the freezing point of alcoholic radiator solutions. The tube is made of pliable, unbreakable material. The instrument indicates the correct proportions of alcohol and water to get any desired freezing point. It is packed in a handy carrying case. Price, \$2.—Steiner Mfg. Co., Long Island City, N. Y.

SUPERIOR TOW LINES

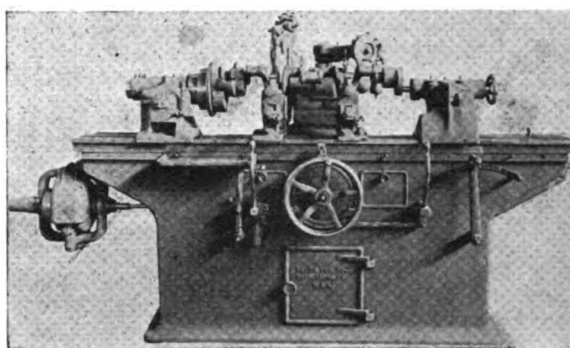
This is a tow line with sufficient capacity to pull two tons up a 30 per cent grade. It is 16 ft. long, but when coiled it is 6 in. in diameter and about 3 in. thick so it will fit into the tool box easily. The material used in its construction is Manila fiber and No. 18 annealed iron wire. It is guaranteed against breakage for one year. Price, \$2.50.—Superior Mfg. Co., High Avenue at Second Street, Cleveland.



Superior Tow Line

No. 4-A LANDIS GRINDER

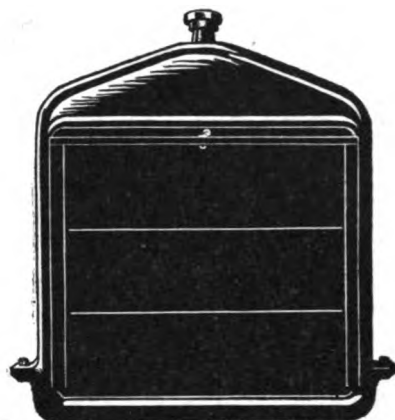
This grinder is designed for regrounding work in the repair shop and garage. It is of the self-contained type, and includes some of the features of a universal machine. It handles both internal and external grinding, as well as surface grinding. It is designed for such jobs as piston and piston pin grinding, crankshaft, ball race and taper grinding. It swings 16 in. and takes 66 in. between centers. Using a 24-in. wheel it grinds diameters up to 4 in. The horsepower required to drive it is 8.—Landis Tool Co., Waynesboro, Pa.



Landis Grinder

HEAT-SEAL SHUTTER FOR FORDS

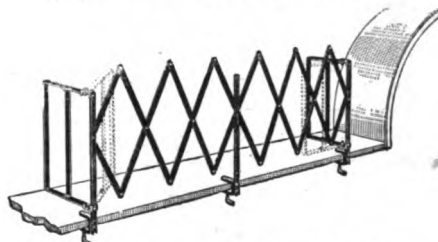
A metal curtain consisting of three plates, two side channels and a top flange. The bottom of the radiator is covered at all times. The shutter may be moved up to any position by pulling a chain held in a clamp on the steering column. When the chain is released, the shutter is opened by springs. It is finished in black enamel, and can be installed without removing shell. Price, \$4.—Heat-Seal Shutter Co., 2201 West Fort Street, Detroit.



Heat-Seal Shutter for Fords

KITTLE COLLAPSIBLE LUGGAGE CARRIER.

A steel luggage carrier, fitting on the runningboard, which is adjustable to any length. When not in use, it can be removed, folded up and placed in the tool box. A gate is provided at each end for those who do not desire to have their luggage touch the fender. The finish is black enamel. Price, \$6. Kittle Mfg. Co., 1526 South Wabash Avenue, Chicago.



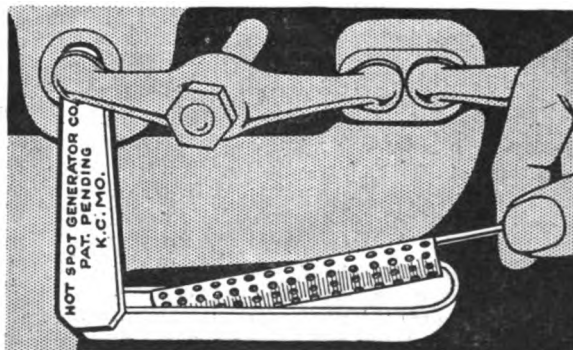
Kittle Collapsible Luggage Carrier

999 PATENT POLISH

This polish is said to clean and polish in one operation. Dirt and grease come off with a little rubbing, and a protective, water-proof film remains. It contains no ingredients which might damage the finish. It is put up in half-pint, pint and quart cans. Prices, 50 cents, 75 cents and \$1.25 respectively.—Damon Mfg. Co., 901 Rush Street, Chicago.

HOT SPOT GENERATOR.

A hot spot device for facilitating the starting of the Ford engine in cold weather. The generator is attached to the manifold clamp as shown, and adjusted so that it is about 5/16 in. from the intake manifold. To operate, the burner is removed and saturated with alcohol or gasoline, and then replaced and lighted. Price, \$1. Hot Spot Generator Co., 422 Cambridge Avenue, Kansas City, Mo.



Hot Spot Generator

ALLEN-BRADLEY HIGH RATE TEST SET

This set has been improved by providing for the installation of a battery-testing voltmeter. A double-prod voltage tester with flexible cords is furnished with each voltmeter. This additional equipment is optional. A test chart is furnished with the set which enables the operator to interpret the results quickly and accurately.—Allen-Bradley Co., Milwaukee, Wis.

WRIGHT HIGH SPEED HOIST

Strength, speed and durability are claimed for this hoist. It operates on the planetary system of gearing. The main driving shaft and pinion is a nickel steel forging. A non-fouling chain guide permits raising or lowering the load by a pull on the chain from any angle. Made in capacities of from 1/4 up to 20 tons. Prices range from \$70 up to \$850.—Wright Mfg. Co., Lisbon, Ohio.



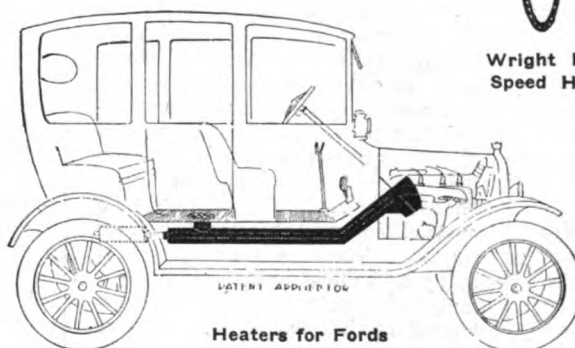
Wright High Speed Hoist

RADIOTOMETER

A new instrument for testing radiator solutions. Its operation is similar to that of the battery hydrometer. A graduated chart on the float indicates the strength of the solution required to withstand any temperature. Alcohol can then be added in the necessary proportions.—Beckley-Ralston Co., Chicago.

S-J HEATERS FOR FORDS

This heater fits over the manifold, and the tube bolts around the exhaust pipe. Registers are provided to conduct the warm air to the interior of the car. Three models are made—A1 for sedans, A2 for coupes, and A3 for touring cars. Price, \$7.50.—Shotwell-Johnson Co., Minneapolis, Minn.



Heaters for Fords

WILSON'S SLAPATCH

This patch consists of a piece of live self-adhering rubber, a protective linen covering, a double weight canvas back to give strength, and a canvas flap to hold the patch in position while it is setting. The overall dimensions of the patch are 4 1/2 x 5 in. In applying the patch, the only preparation necessary is a thorough cleaning with gasoline of the surface to be repaired. Price, \$1 each.—Wilson Rubber Co., Des Moines, Iowa.

Winter Business

Send in a Winter Business Idea—Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management directed toward getting winter business and winter profits. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever we shall be glad to shape it up for you.

Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Winter Sales Effort Makes Spring Profits

Here Are Ten Classes of Prospects Recommended for Special Attention by the General Motors Acceptance Corporation

NEXT spring's sales are going to reflect this winter's activity.

With this idea as the basis of its campaign the General Motors Acceptance Corporation is advising dealers to make classifications of their prospects by those occupations in which automobiles are used most effectively, and solicit each classification persistently, during the winter.

It is the belief of the G. M. A. C. that fundamental conditions are shaping themselves for a big spring boom in automobile sales, an actual shortage of cars. In support of this belief it is pointed out that buyers are holding off and getting along without things and meanwhile their bank accounts are growing—when they finally are forced to buy they will be just as eager and insistent as they were when they were spending as fast as they earned. It is pointed out further, that factories are running only part time and therefore less cars will be available next spring than formerly.

According to the G. M. A. C. figures about 1,250,000 cars will be scrapped in 1921, or 15 per cent of the cars now running. There are 9,330,000 families in this country with cash incomes from \$1,000 to \$4,000 a year who do not own cars but can, since there are 6,670,000 families similarly situated who do own and maintain automobiles.

In advising this concentrated sales effort the G. M. A. C. urges dealers to make up lists of prospects from every available source. Take an automobile registration list, for instance, and mark all cars five or more years old. There are your replacement prospects. Get after them one by one. Don't be satisfied with a single call, but solicit each one again and again. Thus, you lay the foundation for quick, one-call sales in the spring.

The G. M. A. C. inspirational campaign for dealers is carried in weekly bulletins accompanied by letter size inserts devoted to the various classifications of prospects suggested.

The first bulletin carries the title: "A Car a Day Keeps the Sheriff Away." It stresses the importance of systematic, intensive selling work in winter and warns that many people who won't buy now will purchase in the spring—and if they are solicited repeatedly now—"a yes in May is worth six noes to-day."

The second bulletin entitled "Who has a Horse?" directs attention to the fact

fore, there are, out of 151,132 doctors and dentists in the country, 51,000 doctors who are still to buy cars. Also, there are hundreds of thousands of doctors' cars wearing out daily, and half of them are open cars. Every doctor should drive an ENCLOSED car, every day.

"Make a list of all the doctors in your territory and call on them and see how they are fixed in regard to automobiles. You can spend most time, of course, with those who haven't cars. They should be called on again and again. Those who already have machines, and of course they will be in the majority, should be queried as to the age and make of their cars. There is no time like the winter in which to sell cars to doctors.—You help humanitarian work by selling cars to doctors."

Bulletin No. 4 says there are 638,088 livery, storage and transfer firms.

"Take a census of your warehouse and express men. Discover those who have horse rigs or old models of trucks or passenger cars. Warehousemen, livery, express and storage and transfer men all come in the same class, and when you have talked to one you will likely get a lead to all the others."

Bulletin No. 5 directs attention to dry goods stores. "This one selling point might interest your local dry goods stores. Show them the advertising value of a delivery truck. Tell them that keeping the truck on the road, even when it has no deliveries to make will lead people to think that the store is busier than it actually is and induce people to do more business with it. Dry goods stores in the smaller towns complain about mail-order competition. Have you ever explained to them that if they have a truck they can deliver goods over a radius of 50 to 100 miles quicker and in better shape than the mail-order house can?"

Bakers and confectioners are the prospects suggested in Bulletin No. 6.

"You can smell a bakery half a mile away if the wind is right. Follow your nose—to the baker, he may be a pros-

Substitute Car to Get Repair Work

NEW LONDON, CONN., Feb. 10 —Waterman & Wolf, Inc., are making a special drive this winter to keep their force busy in general repair work and overhauling of business cars. As an added inducement to claims of superior service and moderate prices, the corporation has provided an adequate fleet of delivery cars for rental to business houses at a nominal price while their regular cars are being overhauled and subjected to needed repairs. Their contention is that many a business house would regularly have their delivery cars overhauled if they can secure suitable substitute cars and be assured their delivery system would not be interrupted in the meantime.

that anyone who keeps a horse is a good prospect—it costs just as much to drive a horse nowadays as it does to keep an automobile. The bulletin says: "Every time you see a horse-drawn delivery wagon make a note of the name and address of the store. It may need a motor truck.—Horses aren't your competitors; they are cards in an index of live prospects."

The third bulletin calls attention to the fact that one out of every three doctors and dentists have automobiles. There-

pect. Get after the baker's dough. Make a census of the bakers in your territory, particularly those who have horse-drawn wagons, who should be shown how they can enlarge their markets by the use of a truck. Those who already have machines should be examined for the possibility of replacing them with 1921 models.

Bulletin No. 7 directs attention to owners of flour mills and hay, grain and feed dealers in country communities. It points out that they usually are substantial citizens, owners of real-estate and need the improved forms of transportation.

"Is there a real estate operation planned near you for the spring?" asks Bulletin No. 8. "If there is, this is your grand chance to sell cars to real estate operators. They need machines to take prospects from the railroad station or the end of the car line out to the new tract. Show them the expense, inconvenience and unpleasantness in renting buggies, taxicabs or automobiles from town and the pleasure and profits from owning one or two or more cars of their own with which to carry the prospective purchasers. And of course, you can make an arrangement with the real estate men to get the names of all purchasers of property, for they also will need cars. Most real estate operations are not well provided with transportation facilities and the first residents will be practically dependent upon automobiles."

Contractors are particularly good prospects for automobiles, Bulletin No. 9 advises. "Get a list of all the contractors and builders in your locality and call on them systematically, one by one. Don't make only one call, but solicit each one again and again, until you either have sold him or are absolutely sure that he can't be sold a new car at this time of the year. Expand your sales to contractors."

The tenth bulletin directs attention to the motion picture industry as a rich producer of car prospects.

While only ten classifications are suggested, it is pointed out that there are many others that may be listed and canvassed systematically during the winter months and in this way primed for effective selling when they get ready to buy in the spring.

Maybe Your Business Needs a "Scouting"

"VERY few salesmen are working hard now-a-days—they have convinced themselves that times are hard and there is no business to be had," says the Stewart Truck Men's house-organ of the Stewart Motor Corp., Buffalo, New York.

"It is also a fact that many dealers are in the same frame of mind. One prominent dealer said recently that business was at a standstill, that he did not have one live prospect. He was simply 'resting on his oars' until general business picked up again.

"We realized that business was poor, but there was some to be had. Without this dealer's knowledge we went to the Secretary of State's office and to our astonishment found that there had been over 300 motor trucks sold in his terri-

tory in the past 90 days, during which time he had only sold 36 Stewarts. The situation convinced us that both this dealer and his sales force had a bad case of the 'blues.' In order to convince ourselves that live prospects could be found, without the knowledge of the dealer we employed two young men (not salesmen) and sent them on scout work.

Sells Farm Lights to Fool Chickens



AN Iowa farm light dealer has found the chicken farms especially in need of his products. He had read an article about some experiments that were carried on by an agricultural college which showed that egg production was increased by lighting the hen house from three o'clock until daylight. He talked the experiment over with a farmer and loaned a plant with which to try a similar test. The price of eggs were high during the winter months, and it was an easy matter to make the sale when the hens got busy. The experience of that farmer was used in making further sales. Who said there was no business to be had in the winter?

"First we made up prospective cards from the telephone classified directory for every coal dealer, every confectioner, dyer and cleaner and baker, etc. Then we started the scouts to work. They called on 111 prospects in three and one-half days—the entire cost was a little over \$40 and here are the results.

"Five were immediate prospects.

"Five had just purchased trucks. Both of these stated that they would be in the market for trucks, after January 1st.

"Twenty-six reported that they would not need additional trucks for the next year or so.

"Four said that they would be in the market soon, but decided on other makes of trucks.

"Three used horses and were satisfied. "Thirty-two said they could not use motor trucks.

"The results even surprised us.

"The two scouts did not try to sell, in fact they were not salesmen. The salesmen were promptly sent out to work on the 5 for immediate purchases and 1 sale has been made and others look likely. We are convinced that the same results could be accomplished in your territory with the same system. No matter how poor business is, there is always some to be had."

Maybe your business needs a scout. Think it over.

A Battery Service Club

THE Battery Service & Accessory Co., of Birmingham, Ala., organized what it termed an "Exide Service Club." In its advertisement regarding the club the company said: "Come to our service station for distilled water and we immediately register your car and battery, taking a test of the battery for our files. Every two weeks thereafter, or, as often as necessary, we mail you a card stating that it is time for another test or more water.

"In this way we keep an accurate record of your battery and will save you many a dollar on the upkeep of same.

"This club service is free to all regardless of the make of your car or battery."

There's Business in New Private Garages

THE spring building "drive" will soon be on, and in every community a considerable number of new private garages will go up. By well directed sales effort, the garage or accessory dealer may get a good volume of business equipping these new garages with extra tools, jacks, creepers, oil drums or barrels, lamp protectors, washing supplies, and other utilities. Saffold Garage, Cleveland, has followed this plan for about three years with worthwhile results in sales and profits. Sometimes certain architects or contractors handling considerable new private garage construction co-operate by furnishing patrons' names and addresses for use in form letters or personal solicitation of such "equipment" orders by the garage.

Use of Window Posters

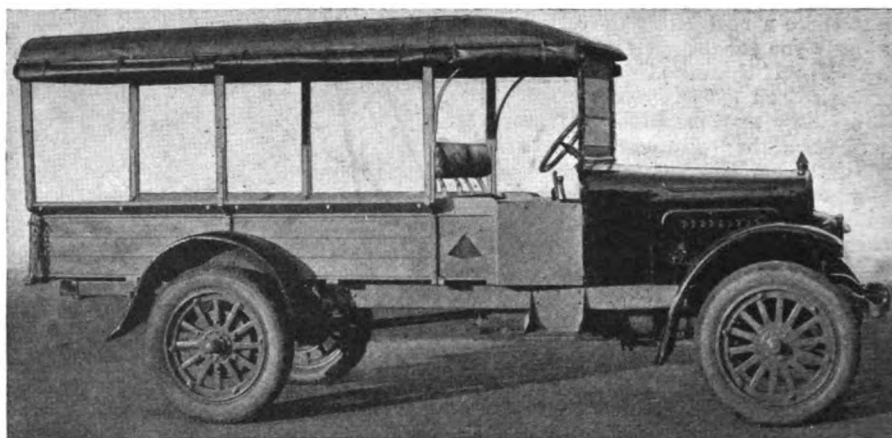
AMILWAUKEE dealer says that he uses window posters, cut-outs and other display material of accessories freely if—and it is a large IF—the article is shown as it will appear when in use, with silhouette outlines of a part of the car, dash, windshield, etc., shown. When the article is shown alone, without any surroundings to indicate how or where it will be used, he declined to put up the advertising matter. He says that the suggestion to buy and own a device is much stronger when it is illustrated with some suggestion of how it will look and where it belongs, even though the consumer knows all about it.

Service Speed Wagon Sells for \$1840.

Use of Transverse Front Spring Permits of Three-Point Frame Suspension

Specifications

Price—\$1,840.
Capacity— $\frac{3}{4}$ to 1 ton.
Engine—Midwest, 4-cylinder, $3\frac{3}{8}$ x 5 in.
Electrical System—Remy.
Clutch—Brown-Lipe, dry plate.
Gearset—Brown-Lipe, 3 speed.
Rear Axle—Eaton, spiral bevel.
Wheelbase—132 in.
Tires—34 x $4\frac{1}{2}$ in. front; 35 x 5 in. rear.
Manufacturer—Service Motor Truck Co.,
Wabash, Ind.



The Speed Wagon is the latest addition to the Service line of motor trucks

THE new Service Speed Wagon is assembled of standard units, and the most important variation from conventional practice is found in the spring suspension. It is rated at $\frac{3}{4}$ to 1 ton, and is priced at \$1,840.

The front axle is of the reverse Elliot type, drop forged, I-beam section. There is but a single front spring, and this is a half-elliptic running parallel to the axis of the front axle. It is pivoted at both ends of the axle and supported in a trunnion at the center. This construction makes the use of radius rods necessary which are bolted to the gearset housing and taper fitted in the front axle. The engine is supported at four points, the two rear legs being bolted to the frame against the tension of heavy coil springs. The front spring is 38 in. long, and the rear springs, which are of the conven-

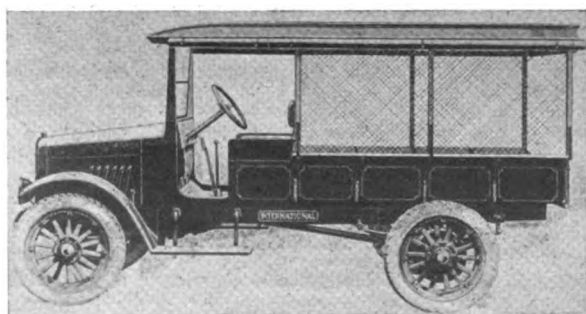
tional semi-elliptic design, are 50 in. long.

The engine is a new type of Midwest. The four cylinders are block cast integral with the upper half of the crankcase. The cylinder dimensions are $3\frac{3}{8}$ x 5 in. The valves are located in the head, and the cylinder head is removable. The crankshaft is supported in two bearings and is counterbalanced. Remy starting and lighting, and battery ignition, and an Exide battery make up the electrical equipment. The carburetor is a Stromberg. The clutch and gearset are a unit with the engine, and both are of Brown-Lipe make. A metallic universal is used at the forward end of the propeller shaft,

and the fabric type at the rear. The rear axle is an Eaton spiral bevel, and the following gear ratios are optional: $5\frac{1}{2}$, 5% and 6-1/7 to 1.

The frame is made of pressed steel channels $5\frac{1}{2}$ in. deep, and $\frac{1}{2}$ in. thick, with 3 in. flanges. Pneumatic tires are standard equipment. The steering gear is of the worm and sector type, the steering column being on the left side, and the control levers in the center. Both brakes act internally on drums on the rear wheels. The wheelbase is 132 in., and the chassis weight is 3100 lb. Either an open or covered body, weighing 600 and 700 lb. respectively, can be furnished from stock at additional cost.

International Harvester Adds $\frac{3}{4}$ Ton Model



New International Harvester Co. speed truck with express body

Specifications

Price—\$1,500.
Capacity—1500 lb.
Engine—4-cylinder, $3\frac{3}{8}$ x 5 in.
Clutch—Multiple dry disk.
Gearset—3 speed.
Rear Axle—Internal gear.
Springs—Semi-elliptic.
Tires—34 x 5 in., cord.
Wheelbase—124 in.

conjunction with a fin and tube type of radiator, is used. Electric starting and lighting and battery ignition are standard equipment.

The clutch is a dry plate, multiple disk, and the gearset provides three speeds forward. The front axle is a drop-forged I-beam, and the rear an internal gear. The overall reduction in high gear is 6.3 to 1.

The frame is made of 5-in. pressed steel channels, and the springs are half-elliptic front and rear, with auxiliary quarter elliptic springs at the rear. Both brakes operate on drums on the rear wheel; the service brake contracting and the emergency expanding. Artillery type wheels fitted with 34 x 5 in. cord tires on demountable rims are regular equipment. A 12-gal. fuel tank is located in the cowl.

A NEW speed truck, priced at \$1500, and rated at $\frac{3}{4}$ -ton, is being put in production at Springfield, O., by the International Harvester Co. This model

has a 4-cylinder, block-cast, L-head engine with $3\frac{3}{8}$ in. bore and 5 in. stroke. Lubrication is by pump and splash, and the thermo-syphon system of cooling, in

Rochester Show Starts Spring Buying

Country Dealers Inspired to New Sales Effort

Little Hope Held for Improvement in Truck Market Before Summer

ROCHESTER, Feb. 9.

BACK to selling with a crash! This laconic report summarizes the sentiment in Rochester's automotive circles at the close of the third day of the 13th Annual Motor Car Show in Exposition Park this week.

With 92 sales reported the first night, about 20 of which were in wholesale lots to sub-dealers in surrounding towns, and 101 sales reported on the second night, the dealers are predicting that the week's show will develop wholesale and retail car sales close to the 500 mark.

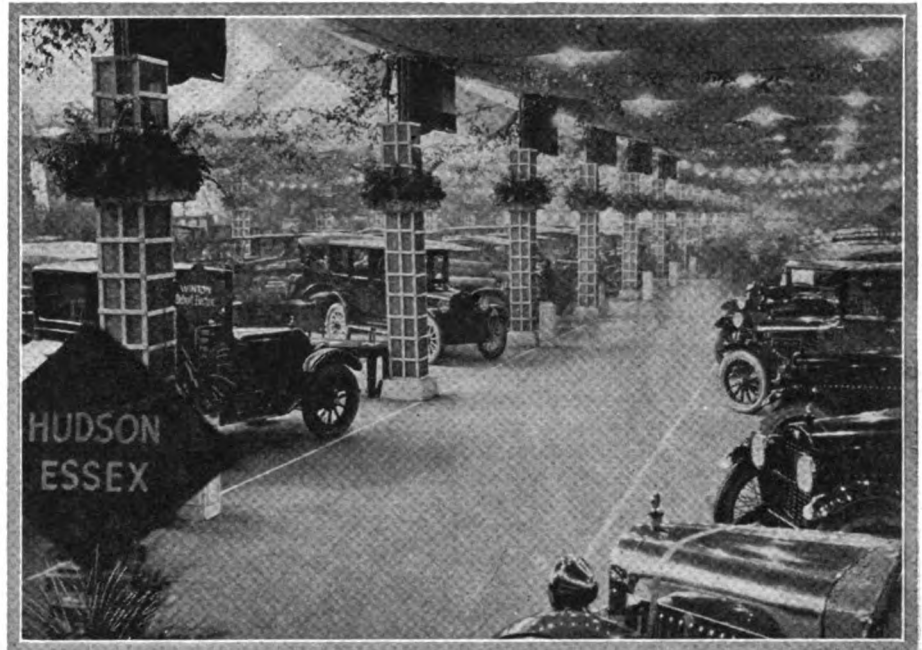
The enthusiastic predictions are based on the exceptionally fine quality of the attendance and the actual buying interest evidenced by the early visitors. In fact, the quality of the attendance is the outstanding feature of the show. In numbers, it has been disappointing. The first three nights produced only about 50 per cent of last year's attendance, but this was explained by the fact that in former years the dealers who bought most tickets got the choice spaces while this year spaces were drawn for. As a result, there was not the indiscriminate distribution of tickets by dealers this year. The people who did attend paid admission and came to buy.

Last year's show figures indicate that two out of every hundred persons visiting the show purchased a car, while this year the buyers have been about six in every hundred.

While the passenger car business has been greater than expected, there is little indication that the dealers in motor trucks and accessories are going to receive any marked increase in sales.

A surprisingly large number of persons came from the farming districts to the show, but their buying proved a distinct disappointment to the dealers. In fact, their sales averaged less than two to the hundred who came from the country districts. Poor markets for crops is the reason given for the unwillingness of the farm folk to buy—most of them de-

Looking Down the Main Aisle at Rochester



The beautiful Rochester show inspired dealers and owners to increased buying activity. The attendance, while not so great as last year, contained more buyers proportionately. The need of strong sales effort in the farm districts was demonstrated.

clared they expected to get along with their old cars for another year.

The tight money market which requires a big premium before a person can buy a machine on credit, has been one of the contributory causes for the slow truck sales. Things are tighter than previous periods in this section at the present time in the truck market—one firm selling trucks ranging from \$2,000 to \$5,000 having sold only six trucks since Dec. 1. Things are not expected to really open strong in the truck field hereabouts before summer.

In decorative effects this year's show surpassed all previous ones. The background was a garden effect.

Effective Publicity Used

The show was well sold to the territory, the Rochester Automobile Trades Association, under whose auspices it is being conducted, having spent \$5,000 in advertising of various kinds. Trolley cars carried huge banners announcing the event for a week before the doors opened. Handsome posters were displayed in motor car and other shop windows. The newspaper copy was attractively prepared and was run in papers covering the territory as far west as Batavia, east to Lyons, southeast to Geneva and south to Dansville and Mount Morris. More than \$600 was spent in

country newspaper publicity alone, and in addition to this the crossroads for several weeks have been decorated with large one-sheet posters.

Throughout the publicity campaign the appeal was carried directly to persons who would be most interested in buying. With the elimination of the sale of tickets in large numbers to the dealers for distribution it was felt that much of the curiosity crowd would be eliminated, and the attendance at the show thus far has demonstrated the success of the change.

The exposition buildings contain 163 models of 53 makes of passenger cars, while 78 motor trucks are exhibited. One entire building is devoted to the accessory exhibits.

The Automobile Club of Rochester and the Rochester Safety Council had booths. The Safety Council had attendants to explain the necessity of careful driving.

After the covers were placed on the cars the first night, 25 employees of Strong & Buelte Motors, Inc., attended the annual Chandler and Cleveland dinner. It was given by the distributors of the two cars in honor of the visiting representatives of the two factories. As it has been the custom to name the annual event for the factory representatives, this year's was called the Hubbard-Clemensen Dinner. Hubbard represents Chandler and Clemensen, Cleveland.

In This New England City Dealers Are Reaping the Benefits of Sound Association Activity

**Their Cooperative Efforts Have Impressed the Bankers and
Are Helping to Solve the Used Car and Other Problems.
—Read How Worcester Is Utilizing the Strength in Unity**

THROUGH the efforts of a live dealers' association, the group of dealers in a middle-sized New England town has been able to gain the confidence of the bankers, gain the confidence of one another, adopt a sound used-car policy, and in other ways make business better for every individual dealer. Great progress has been made during the last year, but the beginnings of the recent achievements started some time ago.

The results have been achieved primarily through the

cooperative effort of the various dealers; through a growth and development of mutual goodwill and confidence. This growth and development has resulted in very practical and material benefits to every individual dealer. It is this factor which renders the work of the Worcester (Mass.) Dealers' Association particularly interesting. The methods used are specific and sound, and offer ideas capable of adaptation in many other places where conditions are somewhat similar.

THE feeling among dealers in Worcester in the old days was much as it has been in nearly every town. Competition was not only keen but bitter. There was but one decent car on the market, as far as any particular dealer was concerned; that was the one which he was selling. Most dealers distrusted the fairness of every other dealer, co-operative effort was unthought of, and the general good of the automobile business suffered accordingly.

Even during the early days of the dealers' association, there were many bitter discussions of trade practices both in and out of meeting. But gradually a spirit of good will and co-operation has been developed. It has become evident to most members of this association that the "all-for-one and one-for-all" idea is not essentially a Sunday School text, but a real money-making business proposition. And upon the foundation of this spirit have been built recently several very important achievements. The spirit is not yet perfect; neither are the achievements. But both are far above the average, and the latter are specially worthy of detailed analysis.

The concrete results attained during the past year cannot be told without mentioning F. S. Howard, president of the Worcester dealers' association. His distinct personality has played a large part in the moulding of these results.

His firm and energetic belief in the essential benefits of co-operative effort in the promotion of better business for automobile dealers, better consideration of the dealer by the public, and better treatment of the dealer by bankers and other business men of the community has built an organization under his leadership that is bound to move on; to be actively constructive. And so his vigorous leadership, ably assisted by the active co-operation of the most progres-

sive dealers of the town, has accomplished some very real results during recent months.

A definite method of co-operating with the banking and financial interests of the town has been established.

With the coming of business depression, it became increasingly evident that the financial interests seemed to bear little respect for the capabilities and business judgment of automobile dealers. The dealers were not getting from the banks the same co-operation and assistance that was being given to business men in other lines of trade. The automobile men did not seem to be understood by the bankers in general. Thus far the experience was similar to that in many other places. The condition always had obtained, but became more active when financial stress came.

The Worcester dealers' association made a careful examination of the directorate of the four leading banks in town and discovered that none of these boards contained the name of a man who knew anything about the automobile business; no one who had an intimate knowledge of dealer's methods and problems, and who understood the ideals and practices of the automobile industry.

Meeting the Banker

It was evident that much of the lack of co-operation experienced by the dealers was due to this fact. Consequently, the president, representing the dealers' association, personally visited executives of these leading banks and talked the situation over with them fully. He suggested to the bankers the appointment of a committee of four representatives from the dealers' association to confer periodically with the bank representatives concerning specific problems which might arise from time to time in connection with the various dealers.

The bankers accepted the proposal. They were glad to have an opportunity to learn more about the automobile dealers and their methods, and to have the advice of representative members of the association. Here again the necessity for co-operation among the dealers came to the front.

"We have perhaps lacked confidence in the automobile dealers in the past," one of the banking executives said, "because they seemed to have no confidence in each other. Each one with whom we talked suspected and criticised the other. You can't expect outsiders like ourselves to have much confidence in an industry whose members have no confidence in one another."

Consequently this proposal from the dealers' association came to the bankers as a welcome surprise. And they were glad to accept the offer of co-operation.

A committee of four dealers, sound representative business men, was appointed by the president of the association on the recommendation of the association, to form this advisory committee, the president of the association himself being a member of the group.

The procedure of the banks, in case a dealer gets into financial difficulties, is now something like this: A conference is held with the dealers' association advisory committee. The members of this committee are thoroughly familiar with the car this dealer is selling, his sales methods and his personal abilities. Perhaps he has an excellent car—one which sells readily in the territory—and perhaps he is a good salesman, but lacking in executive ability. In such a case, the committee may suggest that it be allowed to assist the dealer for a time in connection with the financial and executive parts of his business, suggesting methods of reducing expense, adjusting costs and improving methods.

Perhaps the dealer, though a good salesman, is utterly lacking in executive ability, and the committee feels that it is probable that he will not be able to pull out of the hole and stay out. In this case, the committee will suggest to this dealer that he retire from his own business and will try to place him in a sales position where his ability will insure him success.

If a dealer is to be closed out in this way, the committee will arrange for other dealers to take the cars that must be sold. These other dealers then arrange to sell them in a normal way; arrange to service them after they are sold, and in this way allow the closing out of the business in a way advantageous to everyone concerned. If the bank were to auction the cars, the financial returns would probably be less, and at the same time the automobile market in the town would be demoralized to a greater or less extent, depending upon the number and type of cars thus sold.

In other words, the bankers are assisted by an advisory council of men who are in a position through daily effort and long experience to judge intelligently the merits of any case in connection with an automobile dealer in that town. And as a result of this conference, a close relationship has been established between the dealers and the banks, and the financial men have come to a new understanding of the type of men engaged in merchandising automobiles in Worcester. Not only have individual cases been adjusted in a more satisfactory manner, but the entire trade has been benefited by the new understanding and the spirit of co-operation which is now being offered by the bankers as a result of that understanding.

Decided progress has also been made in connection with making allowances on used cars. The fallacy of making an allowance on a used car which is greater than the actual value of that car has been emphasized and discussed too often in *Motor World* to necessitate repetition here. It suffices to say that this same evil has been prevalent in Worcester as in other places in the past.

The more progressive dealers of the association long ago came to realize, however, the infinite benefit which would accrue to the trade if used cars were valued on an intelligent basis, and if allowances were confined to the actual merchandising value of the used car presented for trade. Very definite efforts have been made to put across this idea in the Worcester dealers' association, and marked success has been achieved. Again, the success rests fundamentally upon the spirit of co-operation and fairness which has been built up.

So successful have been these efforts, however, that most of the dealers can now call one another and be sure of receiving an honest answer in reply to a question concerning the allowance estimate made on a particular car. This has gone far towards preventing "shopping" with used cars, has enabled dealers to make a profit on every new car they sell—something which was not always possible under old conditions—and is gradu-

ally educating the public to cease expecting to get something for nothing.

President Howard is now advocating the general use of the *Motor World* Used Car Check Sheet, on which repair

Utilizing the Strength in Unity

WHEN a Worcester (Mass.) dealer gets into financial difficulties his bankers meet a committee from the dealers' association—an advisory council composed of men who have the knowledge and experience to judge his case intelligently—before action is taken.

This innovation is the result of sound, constructive association activities that are helping Worcester dealers meet financial, used car and many other vexatious problems of the day.

Read how Worcester's dealer association does it.

estimates can be itemized for each of the various parts of the used car. He presented it to the bankers, explained the idea to them, and received a very hearty and enthusiastic endorsement of the idea.

It appealed particularly to the bankers when Howard explained to them that under present conditions the statements that they received regarding assets were often almost meaningless, since used cars were listed at values which had been arrived at by no intelligent means.

Another of the more recent achieve-

ments of the Worcester dealers' association has been the organization of a Service Managers Branch. The various service managers have been organized, and are now functioning as an active and distinct branch of the dealer association. The many benefits usually accruing through such an organization are being realized in Worcester, and this branch is doing much toward extending the co-operative spirit which the association has found to be so fundamental to the achievement of the important results noted.

As F. S. Howard said recently, "Sometimes the good work of the dealers' association is greatly offset by 'knockers' and ill feeling among the service men. For example, suppose a car of a different make from that which I sell comes into my service station. My mechanic begins to work on it, and starts in something like this, 'Say, where did you get this tin can? Why don't you buy a *real* automobile?' etc., etc." This sort of thing does me an injury in the long run, and certainly does no one any good. By getting the service managers together, we are accomplishing in the service stations the same things that have proved so beneficial in regard to the dealers themselves.

"And we have extended an open invitation to the salesmen of any of the dealers to attend meetings of the association, for we want to make this idea of success through co-operative effort permeate the entire organization of every dealer in the association. For it is only through that method that we can all get the greatest returns from our individual businesses."

The Truck Driver as a Factor in Sales Resistance

ONE of the strongest factors in sales resistance," says a Hartford (Conn.) dealer, "is the truck driver. And this is so because the element under consideration is the human one and therefore hard to combat. A year ago we sold a truck to a firm on which we worked for a long time.

"They were hard to convince and when they did buy expected a full measure of service. And as for service they actually did get a full measure but at higher cost than need be because of the human equation. Word came to me that the head of the house was dissatisfied. His repairs were heavier than need be and he was looking about for another truck.

"Knowing the man very well, I handled the deal myself and the owner came out straight from the shoulder that he was dissatisfied because he really expected more than three miles to the gallon. Now, that truck had been chased all over the east and had done more work in a year than many cars would do in three years or even longer, but it should have stood the racket and as a matter of fact it did not fall down, rather it was a case of high operating expense.

"I got hold of the car during an idle

spell and put the inspectors to work. Among other things we determined that at some time or other the driver had given the rear end a hard jolt, the frame having come down on the axle tubes and being dented in the process. I called the attention of the owner to the fact that even this rough treatment did not wreck the rear end. He conceded that but he had his mind made up to buy another car and there was my sales resistance.

"The cause of it was the driver. I knew the man so I tried the new car angle; I agreed to take in the old car providing the owner would let us put a good man on the job. He had an idea that we were out for something extra but I put it to him this way, that the man was known to us. He was careful and conscientious and he was well worth a little extra money. I finally got the deal over and the new car has been running for some time and the owner says it is giving seventeen miles to the gallon, all of which does not surprise us.

"Now here's the point, the resistance was there good and strong, all in the driver. But the owner did not know that the driver was at fault, he put it on the car."

Reeves Finds Trade Prospects Good

COAST MARKETS LEAD IN PRESENT SELLING

Wisconsin, Ohio and Illinois Stand Out in Midwest— Southern Business Low

NEW YORK, Feb. 11—Alfred Reeves, general manager of the National Automobile Chamber of Commerce, has just returned from a three weeks' trip in the West, where he addressed meetings of dealers, manufacturers and bankers in Wisconsin, Illinois, Missouri, Iowa and Nebraska. He reports encouraging signs of returning business, although after the spring trade future progress in automobile industry will depend largely on the progress that other industries made in returning to normal.

Information gathered on this trip, coupled with reports from other sections of the country, indicate that the best trade in cars and trucks at present is along the Atlantic and Pacific Coasts. It is somewhat spotty in other parts of the country.

New York, Pennsylvania, California, Ohio, Illinois and Wisconsin seem to show the best sales, while the poorest sections appear to be through the South, particularly Texas, in the Dakotas, and in Iowa and Nebraska, although with a general upward turn everywhere.

"As in 1917, 1914 and 1919, the automobile shows have marked the return of buying in this country and a change of spirit not alone in our own industry but among business men generally," said Reeves.

"Surveys in the different sections of the country supplied the interesting information that buyers are waiting for lower prices or more stable prices. They want to be sure that prices will not be changed within the next few months. Almost all say they intend to buy another car, and when asked the kind, invariably mention a car of higher price than the one they are using.

General Trade Improving

"Trade on the Atlantic Coast and on the Pacific Coast seems to be in the best shape. Wisconsin is doing well because her dairy products bring cash every day. Constantly improving trade is reported from Ohio and Illinois. Poor trade is reported from the South, especially Texas, and from sections of Nebraska, Iowa and the Dakotas.

"We find dealers with their houses in order and in the right spirit for a spring sales campaign. They have some grievances against the manufacturers, just as the manufacturers occasionally have grievances against the dealers. That there is a fine spirit of co-operation, however,

is evidenced by the acceptance by the directors of the N. A. C. C. of the suggestion by the National Automobile Dealers Association for a conference of committees to review trade conditions to see what can be done in a co-operative way that will be mutually helpful.

"Our meetings with the bankers showed that the big city banks are doing their share in carrying the distributors and big dealers. Because of the heavy burden of the small town banks in carrying crops of farmers, they have not been able to do much to help their dealers.

Car Utility Appreciated

"Everywhere we find a high appreciation of the need for the motor car and the substantial basis on which the automobile business has been built. Our investigation shows that with a few exceptions, the bankers have cared for our industry as well as they have other industries, and they are not to be blamed for resenting the occasional statement that because one or two banks speak disparagingly of the automobile business, all bankers should be put in the same class.

"We had a long session with Governor Miller of the Federal Reserve Bank of Kansas City, and Asa E. Ramsay, his deputy governor. They insisted that reduction of automobile credit last year was vitally necessary in their territory, not because the automobile business was not essential, but because it already had big credits and other matters were more pressing. Mr. Miller said his bank had just gotten out of debt for the first time in eighteen months, and he hoped soon to be able to again rediscount automobile and some twenty other kinds of paper that had been temporarily sidetracked during the pressing need.

"The farm trade is certain to be poorer than usual this year. Not alone are crops, raised with high labor costs, bringing very much lower prices than expected, but many tenants have raised their crops on land rented at high prices in some cases where the crop will not bring an amount equal to the rent.

"On this three weeks' trip we found that the hysteria in the industry has passed and that the manufacturers and dealers are putting their houses in order and are preparing for a conservative, normal year with intensive sales effort as the high keynote.

Trucks Wait Business Boom

"Bankers and the far-seeing dealers know that the truck business has a fine future, which depends somewhat on how soon we have renewed business activity and how soon the program for our much-needed building operations gets under way. The railroads, too, will buy trucks for short haul work, which spells brighter days for motor trucks, of which we have less than a million in use."

MILWAUKEE BUYERS FAVOR \$2000 CLASS

Analysis of Show Figures Indicates Drop in Low and High Price Sales

MILWAUKEE, Feb. 11—How well the annual Milwaukee show of 1921 functioned as the beginning of the new selling movement is indicated by semi-official figures gathered from passenger car dealers who exhibited at the show. This year actual sales made on the Auditorium floor numbered 261, compared with 171 sales at the 1920 show. This is an increase of nearly 53 per cent, which is considered wholly extraordinary in view of the conditions which confronted dealers at the time, and more especially in comparison with the favorable conditions existing a year ago.

An analysis of the sales figures reveals the interesting information that show sales were mainly in the medium and high-priced passenger car classes. More than one-half of the total retail sales were in the class from \$1,500 to \$2,000, and one-third from \$2,000 to \$3,000, the remainder being almost equally divided between the \$500 to \$1,000 and the \$3,000 to \$7,500 classes. Last year most sales were in the \$500 to \$1,000 class.

As the results of the show, as a retail sales proposition generally, are regarded as a good index upon the demand for passenger cars during the new spring season, Milwaukee dealers feel that their market during the first half of 1921, at least will be among the so-called "middle classes," with the usual demand from the wealthier classes, but by no means the demand from the so-called wage-earning classes that formed a very material bulk of business in the last two to three years.

Atlanta Ford Reopens

ATLANTA, Feb. 11—In line with the general news of revival of business in all lines in this and other sections of the country, following the recent period of depression, is the announcement by R. S. Abbott, manager of the Atlanta factory branch of the Ford Motor Co., of the resumption of operations at this plant Monday, Feb. 7, on a 50 per cent basis. About 150 men were given employment at the outset. The plant has recently been entirely shut down.

Denver Space Sold Quickly

DENVER, Feb. 14—The entire show space at the Denver automobile exhibit, which will be held in the Auditorium here from April 3 to 9, was sold and paid for within eight hours after it was placed on sale.

Factories Cautious on Production

SCHEDULES MAY RISE WITH MARCH DEMAND

Manufacturing for Present to Continue on Sales Basis— Surplus Stocks Diminish

DETROIT, Feb. 11—While there are various indications that automotive production for February will not be increased, naturally the spring demand will prompt materially increased schedules in March. Whether this spring business will reach anything like normal proportions is a problem, but it certainly will mean the resumption of operations in all plants with current demand determining output. It is contended by many and claimed logical, that with the curtailed production of the last few months, the surplus stocks are rapidly being dissipated and the factories will be kept busy supplying the demand after March.

The contention is admitted generally though the more conservative among the manufacturers regard the term "busy" as meaning that the factories will be operating in full time but with greatly reduced forces and the production schedules ranging from 40 to 50 per cent of 1920 record. Adding to prevailing unfavorable conditions are the labor troubles, which are beginning to loom large despite unemployment. While the strike now in progress is confined to the body plants, the agitation for return to high wages paid last year and antagonism toward present reduced wage scales is felt in the automobile plants. This attitude is being nurtured by the idle men, who are attempting to encourage unrest and dissatisfaction among the men at work.

Ford Production Indefinite

No one even seems to guess what the Ford plans are, though the fact that the parts makers have been given no orders to start is regarded as significant, and builders of Ford parts are a unit in expressing belief there will be no production there until after March 1. This situation was forecast at the time the plant went down Christmas Eve.

Dodge plans are equally mysterious. Dodge had large surplus of cars in storage when production was stopped, and although there has been some demand, especially good in certain sections, the stock in the warehouses, in transit and in the hands of dealers, still is said to be large. President F. J. Haynes said this week no plans for the reopening had been formulated.

Packard, which went down ten days ago, will reopen at once with 1000 men, a third of those employed when the closing order went into effect. The

strike in the body plant has been overcome satisfactorily.

Reo this week went ten-hour day full time schedule, with the entire force working. Reo executives expressed confidence of continued improvement. Company delivered 1800 vehicles in January, 720 passenger cars and the balance in speed wagons.

Paige reports renewed optimism among the dealers and a slight improvement in sales, though not sufficient to justify an increased production schedule, and the plant will continue operation as at present, about 25 per cent output.

Essex Plant Still Closed

There is no change at the Hudson-Essex factories. The Essex plant is still closed, but a small force is building both styles in the Hudson plant.

Cadillac was down the greater part of January and had comparatively no output, employees being used in building up the parts stock. They began on a schedule of 40 cars daily February 1, but to the present have not reached this schedule and are building about 25.

Maxwell-Chalmers plants are still idle awaiting outcome of reorganization efforts in New York.

Lincoln officials report encouraging outlook from sales end and a tendency toward improvement, but the manufacturing schedules are not to be increased until such time as sales justify.

Oldsmobile is working full time building new Four and some Eights. No trucks save on orders. Oldsmobile reports many orders at the Chicago show, and encouraging outlook, but the present schedule, varying around 60 daily, will be conducted for the time being.

Briscoe is working 700 men full time, which is about one-third their regular force. Officials bring good reports and say dealers are confident of steady upward trend. The company was in production in January and will not increase their output during February, but will start on a schedule of 80 daily, March 1, and expect to increase output until maximum of 75 daily is reached.

Studebaker on 525 Weekly

Studebaker, which opened Jan. 17, built 800 big sixes in Detroit. Their schedule has been increased to 525 cars weekly, Feb. 1.

Oakland is operating on a basis of 50 daily and striving to reach production, 50 per cent of normal, but officials do not expect to reach that point for 60 days. Good reports received from dealers at the show and a survey of the situation reveals less cars on hand than at the same time last year. Report more Oaklands sold during last 90 days than manufactured.

Buick built around 200 daily during
(Continued on next page)

CLEVELAND PREPARES FOR SALES RETURN

Gradual Increases in Business Seen by Executives as Season Progresses

CLEVELAND, Feb. 11—Factory representatives at the New York, Chicago, Cleveland and other shows have come home convinced that there will be a rebound from the low selling and low production conditions that have prevailed, and that the first movement upward is under way.

"The tide has turned and from now on we may be assured that the automobile business will gradually come into normal," said Frank C. Chandler, president of the Chandler Motor Co., upon his return from the Chicago show. "Orders are coming into the factory in better volume than they did in January. January was better than December, and March will be better than February. Later in the year conditions will be even better and I am optimistic about the record that finally will be written around the present year."

At the Templar factory, Daniel L. Britton, factory manager, said the force of workmen would be increased 50 per cent within the next three weeks to take care of increased schedules. Dealers' orders are coming in in such number that larger production is essential.

Peerless and Winton both report that increased output is contemplated. Other manufacturing establishments are putting their equipment in shape in order to take care of orders expected when the trade gets into full swing.

One of the hopeful signs has been seen in the agricultural districts of the State. The farmer has been mighty sore at the drop in prices for farm products, and especially so when he compared these new prices for what he produces with prices demanded for the things he must purchase. Salesmen have been received better lately.

At the White Motor Co., which has been operating a full day and night force during the period when other plants were either shutting down or greatly curtailing production, a reduction in operations will take place March 1. In the last few months working time has been reduced to five days a week and lately to four.

Jordan To Increase Output

CLEVELAND, Feb. 9—Production at the plant of the Jordan Motor Co. will be increased 50 per cent March 1, according to an announcement made at the annual meeting of stockholders of the company this week. The company expects to gradually increase to normal.

BANKERS TAKE OVER WILLYS CORPORATION

Temporary Arrangements Propose Extension of Claims to May 1—May Unite Interests

NEW YORK, Feb. 7.—Financial affairs of the Willys Corporation have been placed temporarily in the hands of a bankers' committee and no bills are being paid except with the consent of this committee.

A merchandise creditors' committee is being formed with the sanction of the bankers' committee and efforts are being made to obtain the consent of creditors for an extension of time which will permit of some constructive action. The bankers' proposal is for an extension on all claims until May 1, pending permanent refinancing.

The merchandise creditors' committee is headed by F. C. B. Page of the E. W. Bliss Co., and the other members include Joseph B. Tarbell of the American Brake Shoe & Foundry Co. and Theodore Beran of the General Electric Co.

A first preferred stockholders protective committee has been organized and it is understood its attitude will not be entirely sympathetic toward the bankers. The preferred stock of the Willys Corporation provides that no mortgages can be placed on any of the company's property except with the consent of 75 per cent of the preferred stockholders. Joseph P. Cotton of the law firm of McAdoo, Cotton & Franklin, is counsel for the preferred stockholders' committee, which is headed by Howard Bayne and includes U. N. Bethell, Stedman Butterick, Thomas B. Gannett, Robert E. Hunter, Leclanche Moen and Robert L. Montgomery.

The depository for the preferred stock is the Columbia Trust Co. of this city and subdepositories are the First National Bank of Boston, the Central Trust Company of Illinois and the Girard Trust Company of Philadelphia.

Must Meet Contract Obligations

A similar committee is being formed for the second preferred stockholders. A letter sent to them states that the company needs a large sum to meet contract obligations and commitments in connection with the new factory at Elizabeth, N. J.

The second preferred committee is headed by Arthur O. Choate of Clark, Dodge & Co. The depository will be the Bankers Trust Co. and the counsel O'Brien, Boardman, Parker & Fox.

All the various interests involved are exceedingly reticent as to their plans, but it can be stated that reorganization of the Willys interests is in prospect, although none of the details is available. The subject has been under consideration by the bankers interested for several months. The bank chiefly interested is the Chase National, and E. R. Tinker, president of the Chase Securities Co., is a director of most of the Willys units. Walter P. Chrysler, executive vice-presi-

dent of the Willys Corporation, is directing the negotiations of the company with the bankers. Associated with him in this work is J. R. Harbeck, who recently resigned as vice-president and director of the American Can Co. to devote all his time to his automobile interests. These two men are also directing the affairs of the Maxwell-Chalmers Co.

Willys-Overland Not Involved

The Willys-Overland Co. is not involved in any way in the refinancing of the Willys Corporation, although 27 per cent of its stock is owned by the corporation. The property of the Willys Corporation includes the Electric Auto-Lite Corp. with a plant at Toledo, the New Process Gear Corp. with a plant at Syracuse, the Duesenberg Motors Co. and the huge new plant virtually completed at Elizabeth, N. J., for the Chrysler Six.

The capital stock of the Willys Corporation consists of 5,000,000 shares of common of no par value; \$15,000,000 of 8 per cent cumulative convertible first preferred with a par value of \$100 and \$10,000,000 of 7 per cent cumulative convertible second preferred with a par value of \$100. All the preferred stock is outstanding and 4,450,000 shares of the common.

While no authoritative announcement has been made covering the proposed reorganization of the Willys interests, it can be said that the program which had been virtually determined upon a few weeks ago was for the consolidation of all the Willys units in a single company patterned after the General Motors Corp. This would include the Willys-Overland Co. and the Willys Corporation, with their various subsidiaries. The Willys-Overland owns the Willys-Morrow Co. of Elmira, the Wilson Foundry & Machine Co. of Pontiac, and the Moline Plow Co. and all the branches of the Plow company. The Willys-Overland Co. has plants at Toledo, Elyria, Ohio, and Elmira. John N. Willys personally is credited with owning control of the Republic Truck Co., which in turn owns all the common stock of the Torben-sen Axle Co. of Cleveland. Willys and two other men control the Fisk Rubber Co., which in turn controls the Federal Rubber Co. Another company controlled by Willys and his associates is the United States Light & Heat Corp.

Bank Attitude Constructive

The bankers interested in the corporation have assumed a constructive attitude, and it is confidently believed the merchandise creditors will do nothing to embarrass the backers of the reorganization plan. The troubles of the corporation are believed to be of a purely temporary character, and when the demand for their products increases, as it undoubtedly will in a short time, it is expected the burden will soon be lightened. It is considered certain that none of the interests involved will take any step which would necessitate drastic action and that some means will be found which will adequately protect all the investments already made.

FACTORIES CAUTIOUS ON CAR PRODUCTION

Dort Begins Production of New Models—Willys Plants Remain Closed

(Continued from preceding page)

January, and the same schedule will be maintained through February despite the good show business and the optimistic views of dealers. March production schedules depend entirely on demand during February. Factory is working full time but with short force.

There was no production at Willys-Overland or Willys-Knight plants during January, but they hope to clean up surplus cars by March and resume production.

Dort this week began production of new models, and officials say they have orders ahead for 60 days. Vice-President Averill says the great interest manifested during the show indicates renewed buying, but thinks consumers will be more conservative and careful, and does not look for a buying epidemic. Officials will not be led astray by enthusiasm, but will restrict manufacturing to current demand.

Saxon did not produce in January, but began this week on five daily.

Jackson plant is working full time with about 25 per cent of force and limiting production to actual sales requirements.

Hupp on 30 Per Cent Basis

Hupp is employing about 30 per cent normal force and building about 20 cars a day. Hupp executives report the outlook good, and President C. D. Hastings is enthusiastic over the show.

President Sarver, Scripps-Booth, said last week was the best week the company had in a long time, from a sales standpoint. This applied to the Chicago show and entire country. The company is operating with a short force and the schedule of about 10 a day will be maintained until the demand justifies greater production.

Columbia reports improved business, attributable to shows, but will continue the present production schedule at least during February.

Maurice J. Moore Dies

INDIANAPOLIS, Feb. 10.—Maurice J. Moore, secretary and treasurer of the LaFayette Motor Co., died at St. Vincent's Hospital, Feb. 1. Mr. Moore had held the position of secretary and treasurer of LaFayette Motors since the company's inception in 1919; he was also president of the LaFayette Building Co., and was largely responsible for the building of a colony of homes for LaFayette employees near the plant.

He was formerly connected with the Northway Motors Mfg. Co., Detroit, and was also formerly comptroller of the Chevrolet Motor Co., and auditor and later production manager of the Miami Cycle Co. of Middletown, Ohio.

FRENCH ARMY TRUCKS SELL AT LOW PRICE

Sixty-six Returned Vehicles Are Auctioned in Brooklyn Far Below List

NEW YORK, Feb. 10—Sixty-six trucks, including Packards, Macks, Pierce-Arrow, Whites and Rikers, originally bought by the French government and shipped to France and recently returned to this country, were sold at public auction at the L. & F. garage in Brooklyn this week by Samuel T. Freeman & Co., Philadelphia auctioneers. All of the trucks were fitted with standard army types of bodies. They had seen some service, although some few had been driven less than 500 miles, according to the odometer readings and the appearance of the tires. The trucks had been on public exhibition out in the open for three days preceding the sale.

The consignment consisted of ten 2-ton Whites, ten 2-ton Packards and five 3-tonners, sixteen 4-ton Rikers, five 5-ton Pierce-Arrows and five 2-tonners, and fifteen 5½-ton Macks, all with cabs.

All of the trucks were bought "as is." Two of the 2-ton Whites, all of which were 1918 models, were bought in at \$1,300 and \$1,325 respectively, by individual buyers with the remaining eight apparently bought in by an insider at \$900 each. The 1918 list price of these trucks without bodies was \$3,300.

The 2-ton Packards, some of which were equipped with generators for electric lighting, which listed at \$3,200 in the chassis, were sold for a total of \$13,200, or at an average of \$1,320. The lowest selling bid was \$1,225 and the highest \$1,400. All of these Packards were bought by individual users whose businesses include shoes, chemical works, general trucking, iron dealer, farmer, builder, granite dealer, butcher and dye business. The five 3-ton Packards, which originally listed at \$3,900, went for \$10,850, or an average of \$2,170. The lowest selling bid was \$2,125 and the highest \$2,275.

The first two of the 4-ton Riker trucks, which originally listed at \$4,050, went for \$2,050 and \$1,150 respectively. The balance sold for \$850 each.

Three of the 5-ton Pierce-Arrows, which listed at \$5,000 in the chassis, went respectively for \$2,225, \$2,250 and \$2,100. Two others went for \$1,700 each. The first two of the five 2-ton Pierce-Arrows, originally listed at \$3,300, went for \$1,400 and \$1,325 respectively, and the remaining three models at \$1,200 each.

The first of the 5½-ton Macks, which listed at \$4,750, went for \$2,450.

Dealers Attend S. A. E. Dinner

CHICAGO, Feb. 10—Sales and maintenance topics formed a large part of the program of the Society of Automotive Engineers during the one day session held during Chicago show week. The meeting terminated with a banquet at-

tended by 500 engineers and guests, many of whom were dealers and service men. The papers of interest from a sales standpoint were an engineering analysis applied to truck selling by J. C. Thorpe, and, designing to facilitate service work, by T. F. Cullen. At the banquet which was presided over by H. L. Horning, the speakers were David Beecroft, directing editor of the Class Journal Publications and president of the S. A. E.; H. H. Merrick, president of the Great Lakes Trust Co., who spoke optimistically on future financial conditions, and Prof. John Paul Good of the University of Chicago.

U. S. TIRE TO LAUNCH BIG PROMOTION MOVE

INDIANAPOLIS, Feb. 10—A three-day conference of members of the sales promotion department for the central, western and southwestern divisions of the United States Tire Co. and its auxiliary organizations was held in Indianapolis last week. T. J. E. Brown of New York, sales promotion manager for the company, was in charge, and the meetings were held at the plant of the G. & J. Tire Co.

Among the matters discussed was an educational campaign in the form of a correspondence course for retail dealers, including cost accounting, bookkeeping, advertising and selling. It was also announced that an extensive advertising campaign through more than 5000 of the newspapers of the smaller towns will be initiated in conjunction with a direct mail campaign intended to reach more than 2,000,000 automobile owners in rural communities. George S. Shugart, vice-president and sales manager, was present.

TRUCK MAKERS TO URGE BETTER PARTS SERVICE

CHICAGO, Feb. 10—The belief prevailed at the annual convention of the Motor Truck Manufacturers Association held in this city yesterday, that the business situation, in so far as the motor truck industry is concerned, is already showing very tangible evidence of improvement.

The presentation of the subject of the "Establishing of Distributing and Service Stations by the Unit and Part Manufacturers" was followed by a discussion which ended with a motion unanimously carried that a committee of the association be appointed to lay the facts of the situation before the unit and part manufacturers as these facts are seen by the motor truck manufacturer.

Reynolds Ordered Dissolved

MT. CLEMENS, MICH., Feb. 10—The Circuit Court of Macomb County has signed an order dissolving the Reynolds Motor Truck Co. and appointing Charles J. Reimold permanent receiver under a bond of \$75,000. A request by a creditors' committee for the appointment of a joint receiver as their representative was denied.

ARMY TRUCK DUMPING NOW UP TO SENATE

Proviso for Sale of 11,000 Vehicles Passes House—Highway Plea Denied

WASHINGTON, Feb. 11—Ten thousand army trucks and 1000 passenger cars will be placed on the market within a few weeks unless the United States Senate amends or modifies the Army bill which passed the House this week carrying the Anthony proviso directing and authorizing the Secretary of War to declare a surplus of equipment and dispose of it on such terms and conditions as he may deem most advantageous to the best interests of the Government. Dealers and manufacturers throughout the country will have but little time to convince the Senate of the depressive effect the passage of this measure would have on the industry inasmuch as there are few legislative days remaining for the present session.

Congressman Anthony was successful in obtaining favorable action on his measure. He steadfastly refused to heed the pleas of the highway officials that the equipment be transferred. It was his contention that the road-builders had sufficient automotive equipment on hand and could not absorb the trucks and other machines which he wanted sold. A slight revision proposed by Congressman Mann of Illinois clarifying the language of the provision was adopted.

According to Congressman Dempsey's interpretation given to the House during the debate on the provision, "it means that he shall sell in the period covered by the bill, not at any one time but in the period of eighteen months, at least 10,000 trucks."

The bill as now passed will be sent to the Senate. If the Upper House objects to this method of disposing of trucks and cars at a time when the domestic market is glutted and other army trucks are dumped here by foreign dealers, it will be sent to conference for adjustment.

Peugeot To Build Cars Here

NEW YORK, Feb. 11—The Peugeot Automobile Co. of France will form an American company to be known as the Peugeot Company of America, with an authorized capital stock of \$3,000,000 8 per cent cumulative preferred, and 50,000 shares of common stock of no par value. The company will manufacture Peugeot automobiles at a plant to be located in New England. Of the stock \$1,500,000 preferred and 25,000 common shares will be issued at once.

Committee to Direct McCord

DETROIT, Feb. 10—Creditors of the McCord Mfg. Co. will meet Friday to select an advisory committee to take charge of the company's affairs to guard against any action which might prove detrimental to the interests of both the company and creditors.

IOWA DEALERS PLACE SALES HOPE IN SHOW

Open First Sioux City Exhibit in Four Years to Break Down Pessimism

SIoux CITY, IOWA, Feb. 14—Automobile, truck, tractor and accessory dealers opened to-day their first show in four years—a show which is expected to revive, in a measure at least, a business which has been virtually dead since Ford cut his prices last September. In fact sales here have been all but negligible since April, 1920, when the tightening of bank credits began, but the Ford price cut proved the cap-sheaf of a steadily rising wall of sales resistance, which has reduced country dealers to the state of garagemen, storekeepers, bankers or whatever they were before they undertook automobile agencies, and which has forced dealers in the city to live on the profits of 1919 and early 1920.

It seems incredible that this richest agricultural center of the country, marketing point for a large area of wonderfully fertile lands in Iowa, Nebraska and South Dakota, could have suffered such a business depression, but it has. The trouble lies in the sharp decline of farm produce prices, weakening the farmer's buying power and creating a resentment against the slower trend downward of other prices which has virtually taken the farmer out of the market; and in the withdrawal from this territory of millions of dollars which the overprosperous farmers, merchants and wage earners—and even some of the bankers—invested during the boom period in stocks which are now worthless, or nearly so.

There were some local promotions which absorbed huge sums of local capital, for instance a packing plant which is now in receiver's hands, but much of the money invested in securities whose promoters promised big dividends has gone east or west with the promoters, who lost little time in seeking climes which would be healthier—for them. The money is gone, \$200,000,000 from Iowa alone it is said here, and another harvest will have to be marketed before anything like normal conditions can prevail.

Improvement Likely in March

There is prospect of some improvement in the situation after March 1, when banks generally are calling farmers' loans long overdue, thus forcing the agricultural community to disgorge last year's and even some of the 1919 crops stubbornly held in hope of higher prices. The crop liquidation movement is now under way, proceeding about as fast as the elevator men can handle it, and it is on this break in the tight money wall that the automotive men are pinning their faith—and holding a show to exhibit their faith to the community.

It is a bright, attractive show, pro-

moted and decorated with a sizable fund raised by the automotive trade in the face of opposition to sales effort which is hardly described by such a mild word as discouraging. Through the courtesy of the Goodyear Tire & Rubber Co., its new and as yet unoccupied branch building has been provided, at the mere cost of lighting and heating, enabling the dealers to sell space at 33 1/3 cents a foot and to go to the public with an admission charge of only 35 cents. The Chamber of Commerce, of which the dealers are a division under the name of the Motor Trades Bureau, is vigorously behind the show, and the local and territorial newspapers are co-operating splendidly.

Would Pry Loose Buying Move

The dealers expect the show to rout some of the pessimism that dominates all conversation in trade and family circles, they expect it to pry loose some immediate business and to start an upward trend in sales which will hold, not in great volume, but steadily, throughout the year.

Dealers here do not see any possibility of big business this year and this is why: First, they must move a considerable stock of goods in warehouse, a stock which some manufacturers forced into the territory even after the then slow sales came to a complete halt in September. Then they must combat an organized movement of farmers not to buy—anything. Farmers are organizing to use each others' machinery.

But big business men here, including some of the automobile men, are counting on the farmer to come back into the market when he sees the 1921 crop breaking through the ground.

Plenty of Money in District

In the used car field there is no market and dealers have some stocks. Low priced cars, like used cars, are in low demand too, because it was the renters largely who bought them. And the higher priced car field has to face the opposition of bankers who have repeatedly threatened to force payment on a farmer's notes when the word got around that the farmer was going to buy a car. It has happened even in cases where a farmer worth \$100,000 owed the bank only \$20,000, but the bank needed the money and the farmer, who would have sold \$2,000 or \$3,000 worth of produce, even at a sacrifice, refused to let go \$20,000 worth—still hoping for higher prices—so he bought no car.

However, there are in this territory thousands of rich farmers, elevator men, live stock men and merchants, men who are rich in the huge profits of the war period despite their losses of the past ten months. Dealers in cars, trucks, tractors and accessories are going to sell to them and get a fair volume of business until the next harvest sets this country on its feet again. The countryside has shown a good response to the show publicity, with a show a real novelty here, and the outlook is far brighter than it was before it was decided, only three weeks ago, to hold a show.

MINNEAPOLIS SHOW PILES UP BUSINESS

Equipment and Accessory Sales Furnish Feature of Big Merchandising Effort

MINNEAPOLIS, Feb. 14—The Minneapolis automobile show has concluded with an encouraging record of retail and wholesale sales and prospects. With trade week, promoted by local merchants, it has created a new spirit among the trade, which is shared by the hundreds of country dealers and garagemen who came in from Minnesota, North and South Dakota and even Montana and Wyoming.

A most encouraging sign of the week was the apparent intention of country dealers to improve their service facilities. If the patronage of garage equipment exhibit may be taken as a criterion, the Northwest dealers are coming rapidly to a realization that the best sold car is that best serviced, which augurs well for the future of the industry in this territory. Garage equipment sales, to the trade only of course, ran far ahead of small accessory business with both the trade and the public, and some of the purchases were of machine tools or testing apparatus running into several hundred dollars.

One of the notable features of the week was the exhibit of Reinhard Bros., automotive equipment jobber. This company, with the co-operation of several manufacturers, staged a show of its own in its finely equipped new building, attracting 1500 dealers during the week, most of whom lunched in the Reinhard cafeteria.

Reinhard and other show exhibitors of equipment reported a considerable improvement in sales since mid-January, and it was generally agreed that dealers' stocks were so low that a fair volume of business was inevitable from now on.

North Dakota, with its bank failures due to political influence, is the only really dark spot on the Northwest automotive horizon. On some lines of cars and kindred merchandise this state is virtually out of the market for the time being. The all-wheat sections, too, are expected to recover slowly, but southern Minnesota, with diversified crops and a strong dairy industry, is coming rapidly back into the market, not only for cars but for trucks and tractors.

FORD ALTERNATES MEN PENDING PRODUCTION

DETROIT, Feb. 14—The force of men which has been employed at the Ford plant since Feb. 1 gave way to-day to another similar force which will work two weeks and then alternate with the first shift in two-week periods. Most of the men are employed in the parts department, though a large number are employed in keeping the main plants in shape for resumption of production. No statement as to the actual number of employed was given out.

GOODYEAR FINANCING ARRANGED BY BANKS

Voting Trust to Have Selection of Directors—Stockholders to Give Assent

NEW YORK, Feb. 11.—The eagerly awaited report of the plan decided upon for the reorganization and refinancing of the Goodyear Tire & Rubber Co. was made public to-day. It provides for recapitalization and readjustment of the debt and was agreed upon only after weeks of negotiation.

The program will be submitted to the stockholders for ratification at a special meeting to be held in the next fortnight. The adjourned meeting, which was to have been held Friday for discussion of the refinancing plan, will be deferred again.

There have been persistent reports that when the plan went into effect there would be important changes in the management with the elimination of President Seiberling from active control, but official confirmation is lacking. Robert T. Swaine, who is associated with Paul D. Cravath, counsel for the company, said to-day there was no certainty any changes would be made and denied emphatically that any had been decided upon.

It has been understood that provision satisfactory to the merchandise creditors would be made for the future election of directors by the creation of a voting trust or by the creation of management stock vested in five persons designated by the merchandise creditors whose claims are said to aggregate \$70,000,000.

Before the plan can be declared operative it must be approved by the company's stockholders in a meeting to be held shortly, and the stocks which are to go the merchandise and contingent creditors must be exchanged for the debt by negotiation with every creditor. Steps taken denote co-operative progress, but it is recognized that it will be several weeks before the plan can be consummated.

The only issuance of securities for sale to the investor contemplated is \$25,000,000 of first mortgage twenty year 8 per cent sinking fund bonds, but that financing will not be undertaken until the union situation is cleared up.

The plan, as agreed to, is a sort of "when, as and if issued" affair, although it has been assented to by the bankers, the largest creditors and the holders of a majority of the company's common stock. Holders of the existing common and preferred stock will receive like amounts of stock in the reorganized company, except that the shares will be changed to no par value for the purpose of wiping out the existing deficit and of funding 25 per cent of the company's liabilities on merchandise commitments, on which specifications and prices have been fixed. Then the company will be recapitalized by the issuance of the following additional securities: Twenty-

five million dollars of first mortgage bonds; \$25,000,000 of ten year 8 per cent sinking fund debentures; \$35,000,000 of 8 per cent preference stock; \$65,000,000 of 7 per cent preferred stock, and 900,000 shares of common stock of no par value.

The bank creditors' committee will try to effect the sale of \$25,000,000 of debentures, \$35,000,000 of prior preference stock and 256,000 shares of common stock to present holders of the company's stock. Cash realized by the company from that sale will be applied toward the payment of its bank debt and to provide it with new working capital.

RECEIVER FOR REVERE; SALES COMPANY SUES

LOGANSPOUT, IND., Feb. 11.—The Citizens Loan & Trust Co. of this city has been appointed receiver for the Revere Motor Car Corp. by the Circuit Court of Cass County in a suit filed at Hammond by C. Edwin Osborn and other stockholders. Under the order of the court, the bank will keep the company's property intact and the plant in operation for a sufficient length of time to permit the stockholders to refinance the company.

The Revere corporation has been made defendant in damage suits aggregating \$548,000 filed in the Circuit Court here by the Revere Motor Sales Corp. of Delaware. The complaints allege breach of contract, disregard of court judgment and inability or neglect to make payments on cars sold.

The breach of contract suit asks for \$450,000 damages. The disregard of court judgment suit seeks \$25,000. The failure to make payments suit asks for \$59,000, while a fourth suit asks for payment of \$14,000, alleged to have been loaned to the local concern by the plaintiff company. Efforts for an amicable settlement of the case, started two months ago, have failed.

ST. LOUIS MAN WINS FRANKLIN SALES PRIZE

ST. LOUIS, Feb. 10.—A. S. Lyndon of the Franklin Motor Car Co. of St. Louis has been awarded the \$500 cash prize offered by the Franklin Mfg. Co. for the best sales record of any Franklin salesman in the United States. During the contest, which was from Jan. 1 to Jan. 31, Lyndon sold and delivered eight cars.

Wizard Receiver Named

CHARLOTTE, N. C., Feb. 11.—C. J. Bragg has been appointed receiver for the Wizard Automobile Co., Inc., by Judge Harding in the Superior Court here. The advertising of the company was condemned recently by the national vigilance committee of the Advertising Clubs of the World, which declared that the Wizard company had claimed enormous dividends before it had built a single car.

NEW YORK PLANS TAX TO OUST HEAVY TRUCK

Legislation Would Make Li- cense Prohibitive—Action Declared Deliberate

ALBANY, N. Y., Feb. 11.—Heavy motor trucks will be taxed off the roads under the plan of legislation being drafted here to meet the recommendations of Governor Miller's annual message. No secret is made of the intention of the legislation, the lawmakers taking the view that the use of heavy trucks imposes prohibitive road upkeep costs, and that the best way to check this is to tax the heavy vehicles out of existence.

Under the proposed legislation annual fees of \$500 are fixed for trucks of 5-ton carrying capacity; \$600 for 6-ton; \$700 for 7-ton, and \$800 for 8-ton. Trucks of less than 5-ton capacity would be licensed for from \$50 to \$90 a year.

License fees for passenger cars under the new proposed rate would not exceed 10 cents per horsepower, whereas the present rate is 25 cents. The bulk of the tax would apply on car value and it is estimated would add about \$2,000,000 annually to the State's revenue.

"The high tax on motor trucks is being proposed with the deliberate purpose of putting an end to the use of super-motor trucks on our roads," said Senator Lowman, chairman of the Senate committee on internal affairs. "We cannot drive them off the roads, but we propose to tax them off. They tear up the roads frightfully and make not only the upkeep of the roads but the cost of construction and maintenance of bridges along the State roads prohibitive. The interests involved must be compelled by the only means at our disposal to distribute the weight of their loads and use smaller trucks."

N. A. C. C. Prepared To Act

NEW YORK, Feb. 9.—"New York subcommittees of the National Automobile Chamber of Commerce will be prepared to take instant action when the new motor vehicle legislation is presented," said Harry Meixell, secretary of the motor conference committee. Whether the act will be as drastic as outlined is questioned by him, but he said every precaution would be taken to protect the interests of the industry.

Garage License Defeated

DULUTH, MINN., Feb. 11.—A bill to license garages and compel the filing of a \$5,000 bond as a guarantee to owners for any damage which might result to a car stored therein, has been defeated in the Minnesota Legislature, largely through the activity of the Duluth Automobile Trade Association.

Ranger Increases Price

HOUSTON, TEXAS, Feb. 11.—Price of the Ranger truck, model TK-22, has been increased from \$2575 to \$2875 by the Southern Motor Mfg. Assn., Ltd.

GULF DEALERS CHANGE ASSOCIATION PLAN

Organization Now Stock Company With Members Holding Shares—Officers Change

NEW ORLEANS, Feb. 11—Members of the New Orleans Automobile Dealers' Association have transformed their organization into a stock company, with shares at \$100 each, and each member required to own one share. At the last meeting the yearly dues were increased from \$12 to \$100.

Officers elected, to serve for 1921, are William S. Rogers, of the Demack Motor Co., president; A. R. Robert, of the Robert Motor Co., vice-president; Fred Oster, of Oster Brothers, secretary and treasurer; M. Frank Thomson, of Bell & Thomson, and Gus D. Revol, head of the Cadillac and other agencies here, directors. T. B. Moody remains assistant secretary. The association maintains offices at 718 Poydras Street, with a large meeting hall, and the offices of the assistant secretary. This central rallying point for the association has proved of great value in attracting attendance at its meetings and in keeping the organization together.

An important matter now being considered by a special committee of the dealers' association is the State law requiring notarial action for the sale of an automobile, passed in an effort to reduce the number of thefts of automobiles, which had become large throughout Louisiana. At a recent meeting of the association, it was stated that this law, if thoroughly enforced, would cost the dealers of New Orleans alone at least \$100,000 a year in fees, and an endless amount of trouble.

Several members urged that a test case be made and the matter fought through to the State supreme court for decision. This law, it was said, is more strict than that governing the sale of real estate, requiring that record be made of the serial number of the car, the number of the engine, where, when and by whom made, and a full history of the car, before it can be legally sold.

While the law undoubtedly protects the motorist and the automobile buyer—the former from thieves, and the latter from buying stolen cars, it seems to be "in bad" with the dealers, on account of the two or three dollars involved in notarial fees every time they transfer a car, so that in all probability it will be carried into the courts.

Correction

In the advertisement of the Dayton Automotive Wheel Co. in Motor World of Feb. 2, the third from the last word in the fifth line from the top of the copy should have been "Highest" instead of "Lightest." The copy should have read: "Both represent the highest type, etc."

AUBURN SHOW FUNDS TO GO TO HOOVER

AUBURN, N. Y., Feb. 11—Gross gate receipts at the annual automobile show here will be turned over by the dealers' association to the Hoover fund for the relief of the starving children of Europe. In return, the Hoover committee here will push the sale of tickets by means of girls in Red Cross uniforms and will also furnish entertainment at the show in conjunction with the Rotary, Kiwanis, Masonic, Knights of Columbus and Elks organizations of the city.

NEW ORLEANS TO REPEAT EASTER FASHION SHOW

NEW ORLEANS, Feb. 11—The Elks Automobile Fashion Show, in which every automobile dealer in New Orleans has promised to exhibit at least one car, will be held on Easter Sunday at the Fair Grounds. All net receipts will go to the Anti-Tuberculosis Hospital here. Society girls will drive the cars on exhibition, which are kept moving on the Fair Grounds race track and promenades throughout the ten or twelve hours of the show. The cars are not to be decorated, and the entire show is in the open air. Prizes will be awarded for the best combination of costume with car.

This show is one of the social events of the spring, and last year attracted some 30,000 persons to the Fair Grounds. No attempt is made to sell the cars, and no advertising is allowed, but all the dealers believe participation in the show and the resulting newspaper publicity helps them in the actual business of selling cars.

SAN FRANCISCO SEEKS NATIONAL SHOW HONORS

SAN FRANCISCO, Feb. 12—With the opening of the Fifth Annual Pacific Automobile Show, to be staged in this city's Exposition Auditorium, but one week away, motor car distributors and dealers are keyed up to a high pitch of excitement. They are once more making preparations to capture national honors for their annual event—and this year it would seem that recognition is nearer than ever before.

Already the leading hotels of the city declare that reservations are pouring in for show week and it is prophesied that the show this year will draw more people than any event outside of the National Convention that the city has staged for the last year.

Landis Cuts Machine Prices

WAYNESBORO, PA., Feb. 14—Landis Tool Co. will make a reduction of 15 to 20 per cent on all machines, with the exception of the crankshaft grinding machine, on March 1.

TRACTOR INSTRUCTOR STARTS IN ALABAMA

Better Knowledge of Repair Will Increase Sales Possibilities Dealers Believe

ATLANTA, Feb. 11—What is believed by tractor and power farming equipment dealers and distributors in the Southeast to be one of the most important steps looking toward the further development and expansion of the tractor industry in this section is the inauguration at the State agricultural college in Auburn, Ala., of a six months' course in tractor operation that will cover all phases of repair, service, maintenance, rebuilding, etc., including 300 hours as a minimum for each student in actual field operation. The course is supervised by Prof. M. L. Nichols, head of the agricultural engineering department, with the assistance of Prof. J. W. Randolph.

Distributors of tractors in Atlanta, where most of the large manufacturing plants maintain Southeastern headquarters, state that one of the primary objections their dealers meet in the territory is the inability of the farmer owner to properly operate and care for his machine. He is compelled from time to time to pay out money for service to his dealer for the average farmer, the dealers say, does not possess enough mechanical knowledge to properly service the tractor himself without getting it out of order.

The establishment of this course, the first of its kind in any educational institution in the South, will do away with this difficulty and make the merchandising of tractors a more easy matter.

Norwich Dealers Organize

NORWICH, CONN., Feb. 11—Every automotive dealer in this city and vicinity is enrolled in the newly-organized Norwich Automotive Dealers Association. First officers of the association are; President, C. V. Pendleton; vice-president, Julian L. Williams; secretary, Daniel J. McCormick; treasurer, Alfred G. Lillibridge; directors, Bernard Ring and J. L. Williams. Plans are incomplete for the association's first exhibit and the date has not yet been selected. Ernest White is chairman of the committee making plans for the exhibit.

William D. Tremain Dies

FORT DODGE, Feb. 10—William D. Tremain, 64, pioneer automobile dealer of Fort Dodge, died Feb. 1 following a serious illness. He was born in Strawberry Point, Iowa, and engaged in business in Fort Dodge in 1882. The firm of Tremain & Rankin, in which he was a partner with his brother-in-law, George F. Rankin, entered the automobile business in 1907, being the 43rd dealer in the State. He is survived by his widow and three children, George W. Tremain, Mrs. William Whalen and Mrs. Harold Sittig, all of Fort Dodge.

Changes in the Trade

E. J. McCaffrey has been appointed manager of the tire department of the Berroddin Rubber Co., Philadelphia.

Max Arnold, San Francisco, has renewed his contract with the reorganized King Motors Co. for a period of years.

C. E. Redeker has been appointed general manager of the Lintner Motor Co., Milwaukee, state distributor of the Denby and Atlas trucks.

Otto Kaufman, sales manager of the Giant Grip Co., Oshkosh, Wis., who is traveling in Europe, sends his regards through the Motor World to friends.

Hope Motors, Inc., concessionaires in the United States for Panhard & Levassor, Paris, have opened showrooms in New York at 203 West Fifty-seventh Street.

Guy A. Chittick has been appointed service manager of the Larson-Oldsmobile Co., Philadelphia, succeeding James K. Moege, now with the Henry A. Rowan, Jr., Co.

Pennsylvania Rubber Co. opened its St. Louis branch Feb. 1. P. B. Keenan, Chicago branch manager, has been in this city for the past few days making arrangements for the opening.

F. T. "Bill" Bailey, who has been connected with the automobile equipment business for several years, has joined the Zinke Co., Chicago, in eastern and southeastern territory.

L. M. Kilnedinst has been made assistant manager of sales for the Timken Roller Bearing Co. He was formerly manager of the tractor and farm implement division of the sales department.

John J. Braham, Jr., Brooklyn, who was connected with the sales department of the Keystone Tire & Rubber Co., New York, has been elected a vice-president of the Dillion Tire & Rubber Co.

J. Hamacheck & Sons Co., Two Rivers, Wis., has purchased the franchise of J. A. Rummele, Buick dealer in Manitowoc, Wis., together with exclusive selling rights for Manitowoc county.

T. B. Funk, who has been responsible for the recent engineering developments of the Utilitor, has taken charge of the Utilitor sales, succeeding Fred. E. Wilson. Funk, in addition to his new work, will continue as head of the engineering department.

O. Armleder Co., manufacturers of Armleder trucks, have opened a Brooklyn branch house at Third Avenue and Butler Street, which will serve the New York territory. John S. Hyatt is manager of the new branch and A. W. Christopher, sales manager.

Gean B. Smith has been appointed sales manager of the Hamper-Johnson Co., Milwaukee, distributor of the Liberty in Wisconsin and Upper Michigan. Smith has been associated with the company for two years, coming from Chicago, where he was for a long time associated with the Oakland.

A. J. Riggs, of Racine, Wis., has been appointed general sales, manager of the E. L. M. Tire & Rubber Co., of Racine, a new \$200,000 corporation organized a few months ago to manufacture tires, tubes, mechanical rubber goods, etc., using as a plant nucleus the E-Z Rubber Heel Co. factory in that city.

Arthur P. Hawes has joined the organization of F. E. Wing, Marmon distributor in New England, as sales manager. Hawes was at one time manager of the Locomobile in Boston and later became manager of the Philadelphia branch of the same company, controlling Washington and Baltimore territory.

R. H. Mulch, a veteran official of the Chevrolet Motor Co., has been appointed sales manager of the Pacific Coast Chevrolet factory at Oakland. Mulch arrived from New York last week to succeed R. C. Durant, who retires from the salesmanship March 1 to join his father, W. C. Durant, in the production of the new Durant car.

Hare's Motors Ohio Co. has been formed in Cleveland with a capitalization of \$500,000 to distribute the Hare's motor line in Ohio. The company will supersede the Lake Motor Sales Co. and will take over its quarters at 6545 Carnegie Avenue. R. J. Coach is presi-

dent of the company; Fred C. Wood, general manager, and R. B. Livie, sales manager.

C. O. Miniger will succeed J. Allen Smith as president of the United States Light & Heat Corp. Miniger is a vice-president of the Willys Corporation and has been general manager of the Auto-Lite division at Toledo. D. H. Kelly has been elected vice-president and assistant general manager of the United States plant to succeed C. L. Lane, resigned.

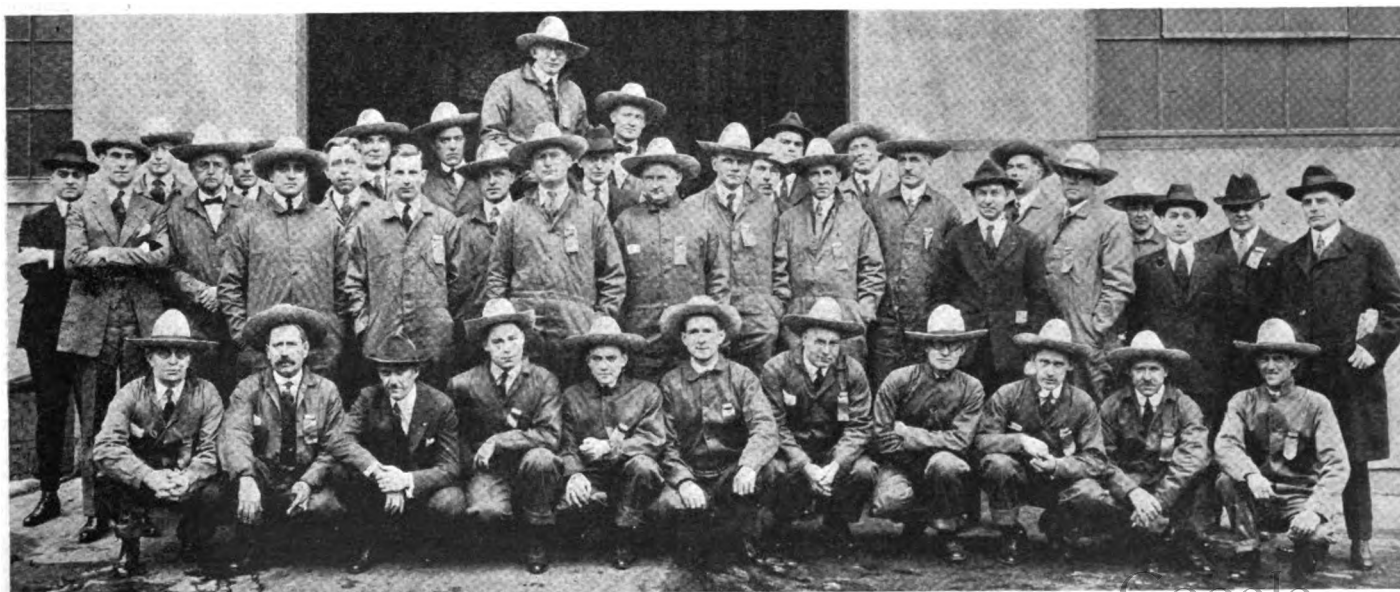
W. J. Foss will head a company which will distribute the new Willys St. Claire car in Philadelphia. He was formerly a partner in the Foss-Hughes Co., this city, and latterly was vice-president in charge of commercial affairs of the Pierce-Arrow Motor Car Co. of Buffalo. Associated with him will be men prominent in Philadelphia commercial and banking circles.

F. H. Ayers has been appointed director of sales of the Fisk Rubber Co. He has been sales manager for the past four years and has been seventeen years with the company. William Wield, who has been assistant sales manager, will succeed him as sales manager, and C. H. Gage and L. N. Southmayd have been appointed assistant sales managers. K. S. Chamberlain will be manager of export sales.

Harry C. Hays, for the past year sales manager and prior to that territory man for the Portland branch of Willys-Overland Pacific, Inc., has been named manager of that branch. He succeeds H. H. Eling, who with A. R. Tyson, manager of the Seattle Willys-Overland Pacific branch, and Harry Olive, manager of the Spokane, Wash., branch, recently organized the Oldsmobile Company of Washington.

Homer Hilton, sales manager of the Oshkosh Four Wheel Drive truck, who is leaving that organization, has been sent to Detroit to take charge of the office of the National Association of Truck Sales Managers, pending the selection of a successor to H. D. Dabney, secretary. Dabney, who joined the organization last June, said today his resignation would become effective March 15. He said he was not yet ready to announce his future connection. Hilton, who is one of the best known members of the Association, will spend a month or two in the local office inducting the new secretary before assuming other duties which he now has in mind.

Utilitor Distributors at Indianapolis



COMING EVENTS

SHOWS

San Bernardino, Cal....Feb. 18-23.....	Annual Automobile Show in conjunction with National Orange Show, San Bernardino Automotive Trades Ass'n, Wichita Springs Park, Fred M. Renfro, Mgr.	Muskegon, Mich.....Feb. 23-Mar. 5...	Annual Automobile Show, Muskegon Automobile Business Ass'n, New Armory, J. C. Fowler, Mgr.
San Francisco .....Feb. 19-26.....	Fifth Annual Pacific Coast Show, Exposition Auditorium, George Wahlgren, Mgr.	Portland, Me.....Feb. 23-Mar. 5...	Annual Automobile Show, Portland Automobile Dealers' Ass'n, Exposition Bldg., H. B. Chandler, Mgr.
Albany, N. Y.....Feb. 19-26.....	Annual Automobile Show, Albany Automobile Dealers' Ass'n, Armory, J. B. Wood, Mgr.	Binghamton, N. Y.....Feb. 23-Mar. 5...	Annual Automobile Show, Binghamton Dealers' Ass'n, Armory, R. B. Moffitt, chmn.
Paterson, N. J.....Feb. 21-26.....	Annual Automobile Show, Armory.	Uniontown, Pa.....March	Annual Automobile Show, Uniontown Automotive Ass'n, Central Garage.
Deadwood, S. D.....Feb. 21-26.....	Annual Automobile Show, Auditorium.	Wichita, Kan.....March 1-5.....	Annual Automobile Show, Wichita Motor Trade Ass'n, Exposition Bldg., Henry B. Marks, Mgr.
Salt Lake City.....Feb. 21-26.....	Annual Automobile Show, Intermountain Automotive Trade Ass'n, W. D. Rishel, Mgr.	Wilmington, Del.....March 1-5.....	Annual Automobile Show, Wilmington Automotive Trade Ass'n, Auditorium.
Louisville .....Feb. 21-26.....	Annual Automobile Show, Louisville Automobile Dealers' Ass'n, Armory.	Quincy, Ill.....March 1-5.....	Annual Automobile Show, State Armory, Quincy Automotive Trade Ass'n.
Grand Rapids, Mich....Feb. 21-26.....	Automobile Business Association, Furniture Exhibition Bldg., M. D. Elgin, Mgr.	Des Moines .....March 2-10.....	Annual Automobile Show, Coliseum, C. G. Van Vleet, Mgr.
Elmira, N. Y.....Feb. 21-26.....	Annual Automobile Show, Elmira Automobile Club, State Armory, H. S. Bryan, Mgr.	Atlantic City.....March 5-12.....	Annual Automobile Show, Automobile Trades Ass'n of Atlantic City, Million Dollar Pier, A. H. Genestzky, Mgr.
Manchester, N. H.....Feb. 21-26.....	Annual Automobile Show, New Hampshire Automotive Dealers' Ass'n, Armory, C. E. Norris, Mgr.	Brooklyn .....March 5-12.....	Annual Automobile Show, Brooklyn Motor Vehicle Dealers' Ass'n, 23rd Regiment Armory, George C. Lewis, Chmn.
Amarillo, Texas.....Feb. 22-24.....	Annual Automobile Show, in conjunction with Buyers and Sellers Convention, Amarillo Automotive Ass'n.	New Haven, Conn.....March 5-12.....	Annual Automobile Show, New Haven Automotive Dealers' Ass'n, Arena.
Poughkeepsie, N. Y....Feb. 22-26.....	Annual Automobile Show, State Armory, W. H. Partlan, Mgr.	Atlanta .....March 5-12.....	Annual Automobile Show, Atlanta Automobile Ass'n, Auditorium, Virgil Shepard, Mgr.
Galesburg, Ill.....Feb. 22-26.....	Annual Automobile Show, Galesburg Automotive Dealers' Ass'n, Armory.	Pittsburgh .....March 5-12.....	Annual Automobile Show, Automotive Ass'n, Inc., Motor Square Garden, J. J. Bell, Mgr.
Saginaw, Mich.....Feb. 22-26.....	Annual Automobile Show, Saginaw Automobile Dealers' Ass'n, R. B. Bishop, Sec'y.	Syracuse, N. Y.....March 7-12.....	Annual Automobile Show, Syracuse Automobile Dealers' Ass'n, Armory, H. H. Smith, Mgr.
Springfield, Ohio.....Feb. 22-26.....	Annual Automobile Show, Springfield Automotive Trade Ass'n, Memorial Hall, W. E. Stevens, Mgr.	Springfield, Mass. ....March 7-12.....	Annual Automobile Show, Springfield Automotive Ass'n, Auditorium, Harry W. Stacy, Mgr.
Stamford, Conn.....Feb. 22-27.....	Annual Automobile Show, Armory, B. B. Stelber, Mgr.	Indianapolis .....March 7-12.....	Annual Automobile Show, Indianapolis Automotive Trade Ass'n, State Fair Grounds, John Orman, Mgr.
Newton, Kan.....Feb. 23-26.....	Annual Automobile Show, Harvey County Motor Trade Ass'n, Auditorium, Henry Marks, Mgr.	Nashville, Tenn.....March 7-12.....	Annual Automobile Show, Nashville Automotive Trade Ass'n, Page Building.
Clinton, Iowa .....Feb. 23-26.....	Annual Automobile Show, Clinton County Automotive Dealers' Ass'n, Coliseum, H. C. Finch, Sec'y.	Wheeling, W. Va.....March 10-11.....	Annual Automobile Show, Wheeling Automotive Dealers' Ass'n, Auditorium, G. M. Ford, Mgr.
Malone, N. Y.....Feb. 23-26.....	Annual Automobile Show.	Pendleton, Ore.....March 10-12.....	Annual Automobile Show, Pendleton Automotive Ass'n, Happy Carmon, J. B. Knight, Mgr.
Warren, Pa.....Feb. 23-26.....	Annual Automobile Show, Warren Automotive Trades Ass'n, Overland - Warren Building.	Newark, N. J.....March 12-19.....	Annual Automobile Show, New Jersey Automotive Exhibition Co., 1st Regiment Armory.
Corry, Pa.....Feb. 23-26.....	Annual Automobile Show, Exley Garage, Corry Automotive Dealers' Ass'n.	Boston .....March 12-19.....	Annual Automobile Show, Boston Automotive Dealers' Ass'n, Mechanic Bldg. and South Armory.
Buffalo .....Feb. 26-Mar. 5.....	Annual Automobile Show, Buffalo Automobile Dealers' Ass'n, 74th Regiment Armory, C. C. Proctor, Mgr.	Richmond, Va.....March 12-19.....	Annual Automobile Show, Richmond Automotive Trade Ass'n, Gray's Armory, J. A. Kline, Mgr.
Duluth, Minn.....Feb. 28-Mar. 5.....	Annual Automobile Show, Duluth Automotive Trade Ass'n, Armory.	Scranton, Pa.....March 14-17.....	Truck and Tractor Show, Scranton Motor Trades Ass'n, Armory, H. B. Andrews, Mgr.

Omaha, Neb.....March 14-19.....Annual Automobile Show, Omaha Automobile Trade Ass'n, Omaha Auditorium, C. G. Powell, Mgr.

WashingtonMarch 14-19.....Annual Automobile Show, Washington Automotive Trade Ass'n, Convention Hall, Rudolph Jose, Chmn.

Greenville, S. C.....March 16-19.....Annual Automobile Show, Greenville Dealers' Ass'n, Textile Hall.

DetroitMarch 19-26.....Annual Automobile Show, Detroit Automobile Dealers' Ass'n, Morgan-Wright Building.

Torrington, Conn.....March 20-26.....Annual Automobile Show, Armory, J. J. Callahan, Mgr.

Deadwood, S. D.....March 21-26.....Annual Automobile Show, Deadwood Business Men's Ass'n, Auditorium.

Cedar Rapids, Iowa....March 21-26.....Annual Automobile Show, Linn County Motor Trades Bureau, Auditorium, E. I. McKibben.

Fort Worth, Texas....March 21-26.....Annual Automobile Show, Fort Worth Automobile Trade Ass'n, First Baptist Church Auditorium, A. T. Lowry, Mgr.

Ottumwa, Iowa.....March 23-26.....Annual Automobile Show, Wapello County Motor Trades Bureau, Davis Bld'g, Frank T. Lynch, Mgr.

Columbia, S. C.....Mar. 28-Apr. 2.....Annual Automobile Show, Columbia Automotive Trade Ass'n, State Fair Bldg., J. M. Green, Mgr.

Charlotte, N. C.....AprilAnnual Automobile Show, Charlotte Automotive Trade Ass'n.

Bridgeton, N. J.....April 2-9.....Annual Automobile Show, Bridgeton Automotive Ass'n.

DenverApril 3-9.....Annual Automobile Show, Auditorium.

Gloversville, N. Y.....April 4-9.....Annual Automobile Show, Armory, J. J. Callahan, Mgr.

SeattleApril 4-9.....Annual Automobile Show, Motor Car Dealers' Ass'n, Arena-Hippodrome, W. J. Coyle, Mgr.

BuffaloApril 11-16.....Motors and Sportsmen's Show, Buffalo Automobile Club, Broadway Auditorium.

CONVENTIONS

Salt Lake City.....Feb. 24-25.....Annual Meeting, Intermountain Automotive Trades Ass'n.

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Feet	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Feet	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Feet	Flow Capacity
Albion-Chalm.	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	G-O	14-28	\$1485	4	Wauk.	4-4 1/2 x 5 1/2	Ker.	3	Pioneer	18-36		4	Own	4-5 1/2 x 6	Ker.	4
Albion-Chalm.	10-18		3	Own	2-5 1/2 x 7	G.K.	2-3	Grain Belt	18-36	2500	4	Wauk.	4-4 1/2 x 5 1/2	G.K.	4	Pioneer	30-60		4	Own	4-7 x 8	G.	10
Albion-Chalm.	18-30		4	Own	4-4 1/2 x 6 1/2	G.K.	3-4	Gray	18-36		3	Wauk.	4-4 1/2 x 5 1/2	Ker.	4	Pioneer	15-30	\$1995	4	Own	4-4 1/2 x 6	G.K.	4
Albion-Chalm.	12-25		4	Own	4-4 1/2 x 6 1/2	G.K.	3	Ground Hog	2800		4	Wauk.	4-4 1/2 x 5 1/2	Ker.	4	Port Haven	12-25	1700	4	Chief	4-4 1/2 x 6	G.K.	3
Albion-Chalm.	14-28		4	Own	4-5 x 8	G.K.	3	Gt. Western St	20-30	1950	4	Beav.	4-4 1/2 x 5 1/2	K.	4	Post	12-20		4	Wauk.	4-4 1/2 x 5 1/2	G.K.	2
Andrews-Kin.D	18-36		4	Clim.	4-5 1/2 x 6 1/2	G.K.	4	Hart-Parr	20	1195	4	Own	2-5 1/2 x 8 1/2	K.D	3	Prairie Dog	9-18		3	Wauk.	4-3 1/2 x 5 1/2	Gas.	2
Appleton	12-20	\$1500	4	Buda	4-1 1/2 x 5 1/2	G.K.	2-3	Hart-Parr	30	1595	4	Own	2-6 1/2 x 7	K.D	3	Prairie Dog	15-30		4	Wauk.	4-4 1/2 x 6 1/2	Gas.	2
Aultman-T.	16-30		4	Clim.	4-5 x 8 1/2	G.K.	4	Heider	9-16		4	Wauk.	4-1 1/2 x 5 1/2	G.K.	3	Ranger	8-16	1875	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Aultman-T.	22-45		4	Own	4-6 1/2 x 8	G.K.	6	Heider	12-20		4	Wauk.	4-4 1/2 x 6 1/2	G.K.	3	Reed	15-30	2195	4	Dom	4-4 1/2 x 6	K	3-4
Aultman-T.	30-60		4	Own	4-7 x 9	G.K.D	8	Heider	6-10		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Reliable	10-20	985	4	Own	2-6 x 7	G.K.D	2
Automot. E-3	12-24		4	Harol's	4-4 x 5 1/2	G.K.	2-3	Hicks	15-30	1750	4	Wauk.	4-4 1/2 x 5 1/2	Kor.G	4	Ree	12-25	1600	4	Wauk.	4-4 1/2 x 5 1/2	G.K.D	3
Avery, S.R. Cal.	6-10		4	Own	4-3 x 4	G.K.	2	Huber	12-25	1385	4	Wauk.	4-4 1/2 x 5 1/2	G.K.D	3	Samson			4	Own	4-4 x 5 1/2	G.K.	2
Avery			3	Own	6-3 x 4	G.K.	2	Illinois	18-36	2375	4	Clim.	4-5 x 8 1/2	G.K.	4	Sandusky	10-20	1250	4	Own	4-4 1/2 x 5 1/2	G.K.D	2
Avery			3	Own	6-3 x 4	G.K.	2	Imperial	40-70	6000	4	Own	4-7 1/2 x 9	G.K.D	10	Sandusky	15-35	1750	4	Own	4-5 x 8 1/2	G.K.D	4
Avery			3	Own	6-3 x 4	G.K.	2	Indiana	6-10		2	LeR.	4-3 1/2 x 4	Gas.	1	Shawnee	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Avery			3	Own	6-3 x 4	G.K.	2	International	8-16		4	Own	4-4 1/2 x 6	G.K.D	2	Shawnee	9-18		2	Gray	4-3 1/2 x 5 1/2	Gas.	2
Avery			3	Own	6-3 x 4	G.K.	2	International	15-30		4	Own	4-5 1/2 x 8	G.K.D	4	Shelby	9-18		2	Wauk.	4-3 1/2 x 5 1/2	Gas.	2
Avery			3	Own	6-3 x 4	G.K.	2	J-T	16-30		2	Chief	4-4 1/2 x 6	G.K	3-4	Shelby	15-30		4	Beav.	4-4 1/2 x 6	G.K	3
Avery			3	Own	6-3 x 4	G.K.	2	Kardel Util.	12-25	1650	4	Midw.	4-4 1/2 x 5 1/2	Gor.K	3	Short Turn	20-40	1500	3	Own	4-4 1/2 x 6	G.K	3
Avery			3	Own	6-3 x 4	G.K.	2	Keech-Gen	15-30	1650	4	Own	2-7 1/2 x 8	G.K	3	Square T	18-35		3	Clim.	4-5 x 8 1/2	G.K	3
Avery			3	Own	6-3 x 4	G.K.	2	Klumb	16-32		4	Clim.	4-5 x 8 1/2	G.K	3	Steady Pull	12-24	1485	4	Own	4-4 x 5 1/2	Gas.	3-4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	7-12	950	4	Own	2-4 x 6	G.K	3	Stearns	2-15	2500	4	Own	4-4 1/2 x 6 1/2	G.K	4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	12-24	1250	4	Own	2-6 x 7	Ker.	3	Stinson	18-36		4	Beav.	4-4 1/2 x 6	G.K	4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	15-25		4	Beav.	4-4 1/2 x 6	G.K.D	3	Stone	20-40		4	Beav.	4-4 1/2 x 6	G.K	4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Tiga	15-27	2625		Wise	4-4 1/2 x 6	G.K	3-4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Titan	10-20		4	Own	2-6 1/2 x 7	G.K.D	3
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Tillman	2-6	385		LeR.	4-3 1/2 x 4 1/2	Gas.	1
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Tipp	30-45	4000	4	Wauk.	4-4 1/2 x 6 1/2	Gas.	4-6
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Toro	6-12	950	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Traylor	6-12	815	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Triumph	18-36	2450	4	Erd.	4-4 1/2 x 6	Ker.	4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Twin City	12-20		4	Own	4-4 1/2 x 6 1/2	G.K	2
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Twin City	20-35		4	Own	4-4 1/2 x 6 1/2	G.K	2
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Twin City	40-65		4	Own	4-4 1/2 x 6 1/2	G.K	5
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Twin City	40-65		4	Own	4-4 1/2 x 6 1/2	G.K	5
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Uncle Sam	10-18	1485	4	Wid	4-4 1/2 x 6	Ker.	2
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Uncle Sam	20-30	2300	4	Beav	4-4 1/2 x 6	Ker.	3-4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Universal	1-4	475	2	Own	1-3 1/2 x 5 1/2	G	1
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Valley	12-24	1750	4	Own	4-4 1/2 x 6 1/2	G.K.D	3
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Victory	9-18	1385	4	Gray	4-3 1/2 x 5 1/2	Gas.	2
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Victory	15-30	1750	4	Wauk.	4-4 1/2 x 5 1/2	Gas.	3
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Vim	10-20	1295		Wauk.	4-3 1/2 x 5 1/2	G.K	2-3
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Wallis	15-25		4	Own	4-4 1/2 x 5 1/2	G.K.D	2
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Watson	12-25		4	Own	2-6 1/2 x 7	G.K.D	3
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Webfoot	28-63	8250	2	Wisc.	4-5 1/2 x 7	G.D	6
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Wellington	12-22		4	Own	4-4 1/2 x 6	Ker.	3-4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Wellington	16-30		4	Wauk.	4-4 1/2 x 6 1/2	G.K	2-3
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Westmore	12-25	1650	4	Wauk.	4-4 1/2 x 6 1/2	G.K	2-3
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Whitney	9-18	1175	4	Own	2-5 1/2 x 6 1/2	Gas.	3
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Wisconsin	15-30	2500	4	Beav.	4-4 1/2 x 6	Ker.	3-4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Wisconsin	16-30		4	Clim.	4-5 x 8 1/2	G.K.D	4
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3	Zelle	12-25		4	Own	4-4 1/2 x 5 1/2	Ker.	3
Avery			3	Own	6-3 x 4	G.K.	2	LaCrosse	16-30		4	Beav.	4-4 1/2 x 6	G.K.D	3								

ABBREVIATIONS: G—Gasoline, K—Kerosene, D—Diesel. Flow capacity varies in relation to operating conditions. Figures are based on 14-in. plows. LeR.—LeRoi, Clim.—Climax, Beav.—Beaver, Dom.—Domon, Cont.—Continental, Wauk.—Waukegan, Wisc.—Wisconsin, T.C.—Twin City, Vur.—Vurus, Evn.—Evinrude, Midw.—Midwest, Com.—Commercial Tractor, —Crawler type. All others are wheel type.

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear	
A. & B. 3T	3	.....	51 1/2 x 4 1/2	48x3 1/2	48x3 1/2	I	Corbitt, B	2 1/2	\$3650	41 1/2 x 5 1/2	36x4	36x4	W
A. & B. 5T	5	.....	51 1/2 x 4 1/2	48x3 1/2	48x5 1/2	I	Corbitt, A	3 1/2	4500	41 1/2 x 5 1/2	36x5	36x10	W
Acason, R B	1 1/2	.....	39 1/2 x 3 1/2	36x3 1/2	36x5	W	Corbitt, A A	5	5500	41 1/2 x 6	36x6	40x6	W
Acason, H	2 1/2	.....	42 1/2 x 3 1/2	36x4	36x8	W	Couple Gear, HC	3 1/2	6100	51 1/2 x 5 1/2	.. x 4	.. x 4	..
Acason, L	3 1/2	.....	45 1/2 x 3 1/2	36x5	36x8	W	Couple Gear, AC	5	6700	51 1/2 x 7	.. x 5	.. x 5	..
Acason, M	5	.....	50 1/2 x 3 1/2	36x6	36x8	W	Couple Gear, LD	7	7450	51 1/2 x 7	.. x 5	.. x 5	..
Ace, C	1 1/2	\$2750	39 1/2 x 3 1/2	34 1/2 x 3 1/2	34 1/2 x 3 1/2	W	Dart, S	1 1/2	2250	39 1/2 x 3 1/2	34 1/2 x 3 1/2	34 1/2 x 3 1/2	W
Ace, A	2 1/2	3450	41 1/2 x 3 1/2	36x4	36x7	W	Dart, M	2 1/2	3000	41 1/2 x 3 1/2	36x4	36x7	W
Ace	3	3650	41 1/2 x 3 1/2	36x6	36x8	W	Dart, W	3 1/2	4000	41 1/2 x 6	36x5	36x10	W
Acme, B	1	2175	39 1/2 x 3 1/2	34 1/2 x 3 1/2	34 1/2 x 3 1/2	W	Day-Elder, A	1	2100	39 1/2 x 3 1/2	34 1/2 x 3 1/2	34 1/2 x 3 1/2	W
Acme, F	1 1/2	2475	39 1/2 x 3 1/2	34 1/2 x 3 1/2	34 1/2 x 3 1/2	W	Day-Elder, B	1 1/2	2300	39 1/2 x 3 1/2	34 1/2 x 3 1/2	34 1/2 x 3 1/2	W
Acme, A	2	3050	41 1/2 x 3 1/2	36x4	36x7	W	Day-Elder, D	2	2750	41 1/2 x 3 1/2	36x4	36x8	W
Acme, C	3 1/2	4050	41 1/2 x 3 1/2	36x5	40x10	W	Day-Elder, E	2 1/2	2950	41 1/2 x 3 1/2	36x4	36x7	W
Acme, E	5	5150	41 1/2 x 3 1/2	36x6	40x12	W	Day-Elder, F	3 1/2	3700	41 1/2 x 3 1/2	36x5	36x8	W
Alb-O-Flax, C	1 1/2	.....	39 1/2 x 3 1/2	36x4	36x5	I	Day-Elder, E	5	4600	41 1/2 x 6	36x5	40x6	W
Alb-Power, C	3 1/2	5800	41 1/2 x 3 1/2	36x7	36x10	W	Dearborn, F	1 1/2	2180	31 1/2 x 5	34x4	34x5	W
AM-American, B-1	1	1795	31 1/2 x 5	32x4	32x4	I	Dearborn, 48	2	2590	39 1/2 x 5 1/2	34x4 1/2	34x7	W
AM-American-C-1 1/2	1 1/2	2195	31 1/2 x 5	32x4	32x4	I	Defiance, D	1 1/2	2550	39 1/2 x 5	35x5 1/2	36x5 1/2	W
American, 40	1 1/2	4575	41 1/2 x 5 1/2	36x5	38x10	W	Defiance, E	2	2750	39 1/2 x 5	35x5 1/2	36x7 1/2	W
Apex, C	1	1745	31 1/2 x 5 1/2	32x4 1/2	32x3 1/2	I	DeKalb, E2 1/2	2 1/2	2250	41 1/2 x 5 1/2	34 1/2 x 3 1/2	36x5	W
Apex, D	1 1/2	1915	31 1/2 x 5 1/2	32x4 1/2	32x4 1/2	I	DeKalb, E2 1/2	2 1/2	2600	41 1/2 x 5 1/2	34 1/2 x 3 1/2	36x5	W
Apex, E	2 1/2	2695	41 1/2 x 5 1/2	36x4	36x6	W	Denby, 12	1	2400	39 1/2 x 5	35x5	36x5	W
Armstrong, HW	2 1/2	.....	41 1/2 x 5 1/2	36x4	36x6	W	Denby, 134	2	2800	39 1/2 x 5	36x4	36x6	W
Armstrong, KW	3 1/2	.....	41 1/2 x 5 1/2	36x5	36x8	W	Denby, 25	3	3600	41 1/2 x 5 1/2	36x4	36x7	W
Armstrong, 20	5	.....	41 1/2 x 5 1/2	36x6	36x8	W	Denby, 27	4	4600	41 1/2 x 5 1/2	36x5	36x8	W
Atco	1 1/2	2450	39 1/2 x 5 1/2	34 1/2 x 3 1/2	34 1/2 x 3 1/2	W	Denby, 210	5	5350	41 1/2 x 5 1/2	36x6	36x8	W
Atlas, 1	2 1/2	3150	41 1/2 x 5 1/2	36x5	36x7	W	Dependable, A	3 1/2	1650	31 1/2 x 5	34x4	36x6	W
Atterbury, 20R	1 1/2	2775	31 1/2 x 5	32x4 1/2	32x4 1/2	W	Dependable, C	1 1/2	2350	39 1/2 x 5 1/2	34 1/2 x 3 1/2	34x5	W
Atterbury, 7CX	2 1/2	3575	41 1/2 x 5 1/2	36x4	36x6	W	Dependable, D	2	2650	41 1/2 x 5 1/2	34x5	36x6	W
Atterbury, 7D	3 1/2	4375	41 1/2 x 5 1/2	36x5	36x8	W	Dependable, E	2 1/2	2950	41 1/2 x 5 1/2	36x4	36x7	W
Atterbury, 8E	5	5975	41 1/2 x 5 1/2	36x6	40x6	W	Dependable, G	3 1/2	3510	41 1/2 x 6	36x6	36x7	W
Autocar, XIUG	2	2300	41 1/2 x 4 1/2	34x4	34x5	D	Diamond-T, T	1 1/2	2450	39 1/2 x 5 1/2	36x4	36x5	W
Autocar, XIUG	2	2400	41 1/2 x 4 1/2	34x4	34x5	D	Diamond-T, FS	1 1/2	2715	39 1/2 x 5 1/2	36x4	36x5	W
Autocar, XIUG	2	2100	39 1/2 x 5	34x4	34x5	D	Diamond-T, U	2	2835	4 x 5 1/2	36x4	36x7	W
Autocar, XIUG	2	2100	39 1/2 x 5	34x4	34x5	D	Diamond-T, K	3 1/2	3925	41 1/2 x 5 1/2	36x5	36x8	W
Available, H1 1/2	1 1/2	2750	41 1/2 x 5 1/2	36x5 1/2	38x7 1/2	W	Diamond-T, EL	5	4615	41 1/2 x 5 1/2	36x6	40x6	W
Available, H2 1/2	2 1/2	3475	41 1/2 x 5 1/2	36x5	36x8	W	Diamond-T, S	5	4900	41 1/2 x 6	36x6	40x6	W
Available, H3 1/2	3 1/2	4475	41 1/2 x 5 1/2	36x5	40x10	W	Diehl, A	1	.....	31 1/2 x 5	34 1/2 x 3 1/2	34x5	W
Available, H5	5	5575	41 1/2 x 6	36x6	40x12	W	Doane	2 1/2	4100	41 1/2 x 5 1/2	36x5	36x7	C
Available, H7	7	6875	5 x 6 1/2	36x6	40x14	D	Doane	3 1/2	5100	41 1/2 x 5 1/2	36x5	36x8	C
Avery	1	1800	3 x 4	34x5 1/2	34x5 1/2	..	Dodge Brothers	1 1/2	1085	39 1/2 x 5 1/2	36x4	36x6	W
Beck, A Jr.	1	2550	39 1/2 x 5	34x4 1/2	34x5 1/2	I	Dorris, C-4	2	3400	41 1/2 x 5 1/2	36x4	36x7	W
Beck, C	2	.....	39 1/2 x 5	34x4	34x5	I	Dorris, K-7	3 1/2	4400	41 1/2 x 5 1/2	36x5	36x10	W
Beck, E	2 1/2	.....	39 1/2 x 5	34x4	34x5	I	Douglas, G	1 1/2	2050	39 1/2 x 5 1/2	34x4	34x5	W
Belmont, A	1 1/2	.....	39 1/2 x 5	34x4	34x5	I	Douglas, H	2	2500	41 1/2 x 5 1/2	34x4	36x7	W
Belmont, B	1 1/2	.....	39 1/2 x 5	34x4	34x5	I	Douglas, I	3	3250	41 1/2 x 5 1/2	36x5	36x8	W
Belmont, C	2	.....	39 1/2 x 5	34x4	34x5	I	Duplex, Limited	1 1/2	2775	4 x 5 1/2	35x5 1/2	38x7 1/2	W
Belmont, AA	3 1/2	1150	39 1/2 x 5	34x4 1/2	34x5 1/2	I	Duplex, Limited	2 1/2	4250	41 1/2 x 5 1/2	36x5	36x8	W
Belmont, BB	1 1/2	1950	39 1/2 x 5	34x4 1/2	34x5 1/2	I	Duty, 20	2	1490	31 1/2 x 5	34x4 1/2	34x5	I
Bessomer, C	1 1/2	.....	39 1/2 x 5	34x4	34x5	I	Eagle, 100	2	1995	39 1/2 x 5 1/2	34x4 1/2	34x5	I
Bessomer, H-2	1 1/2	.....	39 1/2 x 5	36x3 1/2	36x5	I	Elmira, C	1 1/2	500	31 1/2 x 5	34x4 1/2	34x5	I
Bessomer, J-2	1 1/2	.....	39 1/2 x 5	36x3 1/2	36x5	I	Erie	1 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bessomer, K-2	1 1/2	.....	39 1/2 x 5	36x3 1/2	36x5	I	Erie	2 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, K	1	1695	39 1/2 x 5	36x3 1/2	36x5	I	Erie	3 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, G	2	2595	41 1/2 x 5 1/2	36x4 1/2	36x5	I	Erie	5 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, H	3	3095	41 1/2 x 5 1/2	36x5	36x8	I	Erie	7 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	4	3995	41 1/2 x 5 1/2	36x5	36x8	I	Erie	8 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1/2 x 5	34x4 1/2	34x5	W
Bethlehem, J	2 1/2	2700	41 1/2 x 5 1/2	36x4	36x7	W	Erie	9 1/2	.....	39 1			

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive
				Front Rear						Front Rear						Front Rear	
K-Z	1	2250	3 1/2 x 5	34x3 1/2 34x5	W	Parlor, F20	3 1/2	\$4400	4 1/2 x 6	36x5 40x5d	W	Success, B	2 1/2	\$2350	4 1/2 x 5 1/2	34x4 36x7	W
K-Z	1 1/2	2750	3 1/2 x 5	34x4 36x8	W	Parlor, M20	1 1/2	1785	4 1/2 x 6	36x6 40x6d	W	Sullivan, F	1 1/2	2350	3 1/2 x 4 1/2	34x4 36x5	W
K-Z	2 1/2	3250	4 1/2 x 5 1/2	36x4 36x8	W	Plandmont, 4-30	2 1/2	3750	3 1/2 x 5	34x4 34x4	W	Sullivan, H	2	3350	4 1/2 x 5 1/2	36x4 36x7	W
K-Z	3 1/2	4250	4 1/2 x 5 1/2	36x5 40x10	W	Plar co-Arrow	3 1/2	4950	4 1/2 x 5 1/2	36x4 36x4d	W	Sullivan, H	3 1/2	4650	4 1/2 x 5 1/2	36x5 36x5d	W
K-Z	5	5200	4 1/2 x 5 1/2	36x6 40x16d	W	Plar co-Arrow	5	5700	4 1/2 x 5 1/2	36x5 36x5d	W	Superior, D	1	1800	3 1/2 x 5	34x4 34x4	I
Lange, B	2	3000	4 1/2 x 5 1/2	36x4 36x6	C	Plar co-Arrow	2	2190	3 1/2 x 5 1/2	36x5 36x5d	W	Superior, E	2	2750	4 1/2 x 5 1/2	36x4 36x6	I
Larrabee, U	1 1/2	2400	3 1/2 x 5	34x3 1/2 34x5	W	Pioneer, B	1 1/2	2790	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Super Truck, 50	2 1/2	....	4 x 6	36x4 36x8	W
Larrabee, K	2 1/2	3400	4 1/2 x 5 1/2	36x4 36x7	W	Pioneer, N	2 1/2	3190	4 1/2 x 5 1/2	36x4 36x7	W	Super Truck, 70	3 1/2	....	4 x 6	36x5 40x5d	W
Larrabee, L	3 1/2	4200	4 1/2 x 5 1/2	36x5 36x5d	W	Pioneer, F	3 1/2	4190	4 1/2 x 5 1/2	36x5 36x5d	W	Super Truck, 100	5	....	4 1/2 x 6	36x5 40x6d	W
Larrabee, W	5	5100	4 1/2 x 5 1/2	36x6 40x6d	W	Pioneer, A	5	4990	4 1/2 x 5 1/2	36x6 40x6d	W	Super Truck, 150	7 1/2	....	5 x 8	36x6 40x7d	W
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4 36x4d	I	Pittsburger, B	2 1/2	820	2 1/2 x 4	28x3 1/2 28x3 1/2	W	Texas, A38	3 1/2	....	3 1/2 x 5	33x4 33x4	I
Long Star	1 1/2	1745	4 1/2 x 5 1/2	34x4 34x5	W	Pony	1 1/2	4360	4 1/2 x 5 1/2	36x5 36x5	W	Texas, TK30	1 1/2	....	3 1/2 x 5	36x6 36x7	W
Laedighaus, K-S	2	2790	4 1/2 x 5 1/2	36x4 36x7	W	Power, F	2	2350	3 1/2 x 5 1/2	36x6 36x6	W	Texas, TK	1 1/2	....	3 1/2 x 5	36x6 36x7	W
Laedighaus, KL	2	2890	4 1/2 x 5 1/2	36x4 36x7	W	Power, C	2	2150	3 1/2 x 5 1/2	36x5 36x5	W	Tiffin, GW	1 1/2	2885	4 1/2 x 5 1/2	36x3 1/2 36x5	W
Laedighaus	1 1/2	....	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Premcar, B143	1 1/2	4500	4 1/2 x 5 1/2	36x5 36x5d	W	Tiffin, MW	2 1/2	3580	4 1/2 x 5 1/2	36x4 36x5 1/2	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4 36x6	W	Rainier, R-11	1 1/2	2350	3 1/2 x 5 1/2	34x4 34x6	W	Tiffin, TW	3 1/2	4760	4 1/2 x 5 1/2	36x5 36x5d	W
Maccar, H	2 1/2	3750	4 1/2 x 5 1/2	36x4 36x4d	W	Rainier, R-15	2 1/2	2950	4 1/2 x 5 1/2	34x4 34x6	W	Tiffin, UW	5	5850	4 1/2 x 6	36x6 40x6d	W
Maccar, M-2	3 1/2	4500	4 1/2 x 5 1/2	36x5 36x5d	W	Rainier, R-19	3 1/2	2600	4 1/2 x 5 1/2	34x4 34x6	W	Titan, Transport	6	4550	4 1/2 x 6	36x6 40x12	I
Maccar, G	5	5500	4 1/2 x 5 1/2	36x6 40x6d	W	Ranger, R-16	5	2575	4 1/2 x 5 1/2	34x4 34x6	W	Titan, 5-Ton	3 1/2	4400	4 1/2 x 6	36x5 40x6d	I
Mack, AB	1 1/2	3450	4 x 5	36x4 36x3 1/2	D	Ranger, TK-20-2	2	1385	4 1/2 x 5 1/2	34x4 34x4 1/2	B	Tower, J	2 1/2	3400	4 1/2 x 5 1/2	34x4 36x4d	I
Mack, AB	1 1/2	3000	4 x 5	36x4 36x4d	D	Ree, F	1 1/2	2500	4 x 5 1/2	36x3 1/2 36x5	I	Tower, H	2 1/2	3475	4 1/2 x 5 1/2	35x5 36x7	W
Mack, AB	2	3750	4 x 5	36x4 36x4d	D	Reliance, 10A	2	2825	4 x 5 1/2	36x6 36x7	I	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36x5 36x5	I
Mack, AB	2	3300	4 x 5	36x4 36x4d	D	Reliance, 10B	2 1/2	3200	4 1/2 x 5 1/2	36x4 36x4d	I	Tower, C	3 1/2	1595	3 1/2 x 5	34x3 1/2 34x5	I
Mack, AC	3 1/2	4950	5 x 6	36x6 40x6d	C	Reliance, 20B	3 1/2	3675	4 1/2 x 5 1/2	36x6 42x9	I	Transport, 20	1 1/2	1850	3 1/2 x 5	34x3 1/2 34x5	I
Mack, AC	5	5500	5 x 6	36x6 40x6d	C	Reliance, 20C	5	16.5	3 1/2 x 5	36x3 1/2 36x4	I	Transport, 30	2 1/2	2250	3 1/2 x 5	36x3 1/2 36x5	I
Mack, AC	6 1/2	5750	5 x 6	36x6 40x6d	C	Republic, 10	6 1/2	2195	3 1/2 x 5	36x3 1/2 36x5	I	Transport, 50	5	2785	4 1/2 x 5 1/2	36x4 36x7	I
Mack, AC	7 1/2	6000	5 x 6	36x7 40x7d	C	Republic, 11X	7 1/2	2795	4 1/2 x 5 1/2	36x4 36x7	I	Transport, 70	7 1/2	4195	4 1/2 x 6	36x5 36x10	I
Mack Trac, AB	5	3400	4 x 5	36x4 36x4d	C	Republic, 19	5	3845	4 1/2 x 5 1/2	36x5 36x7	I	Traylor, B	1 1/2	2075	3 1/2 x 5 1/2	34x5 34x5	W
Mack Trac, AC	7	4950	5 x 6	36x6 40x6d	C	Riker, B	3 1/2	4600	4 1/2 x 6	36x5 36x5d	W	Traylor, C	3 1/2	2875	4 1/2 x 5 1/2	36x4 36x7	W
Mack Trac, AC	10	5500	5 x 6	36x6 40x6d	C	Riker, BB	4	4700	4 1/2 x 6	36x5 36x5d	W	Traylor, D	3 1/2	3375	4 1/2 x 5 1/2	36x4 36x7	W
Mack Trac, AC	13	5750	5 x 6	36x6 40x6d	C	Rock Falls, 9	1 1/2	2800	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Triangle, AA	3 1/2	1800	3 1/2 x 5	35x5 35x5	I
Mack Trac, AC	15	6000	5 x 6	36x7 40x7d	C	Rows, CW	1 1/2	4500	4 1/2 x 6	36x6 36x6d	W	Triangle, A	1 1/2	2700	3 1/2 x 5 1/2	34x4 36x6	I
Master, JW	1 1/2	2690	4 1/2 x 5 1/2	34x3 1/2 34x5	W	Rows, HW	1 1/2	3300	4 x 5	34x4 36x3 1/2	W	Triangle, C	2 1/2	2050	4 x 5 1/2	36x4 36x7	I
Master, W	2 1/2	3290	4 1/2 x 5 1/2	34x4 36x7	W	Rows, C.D.W.	2	4150	4 x 6	34x5 36x5d	W	Triangle, HB	1 1/2	2400	3 1/2 x 5 1/2	36x3 1/2 36x5	W
Master, D	2 1/2	3540	4 1/2 x 5 1/2	34x4 36x7	W	Rows, G.S.W.	3	5250	3 1/2 x 5 1/2	36x7 42x9 1/2	W	Twin City, B.W.	2	3900	3 1/2 x 5 1/2	36x4 36x7	W
Master, A	3 1/2	4190	4 1/2 x 5 1/2	36x5 40x5d	D	Rows, F.P.W.	3 1/2	5500	4 1/2 x 6	36x6 40x6d	W	Twin City, F.W.D.B.	3 1/2	4750	5 1/2 x 6	36x6 36x6	I
Master, E	3 1/2	4640	4 1/2 x 5 1/2	36x5 40x5d	D	Rumely	1 1/2	865	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Twin City, FWDA	5	5250	5 1/2 x 6	36x7 36x7	I
Master, B	5	5290	4 1/2 x 5 1/2	36x6 40x6d	D	Samsen, 15	1 1/2	1185	3 1/2 x 5	36x3 1/2 36x5	B	Ultimate, A	2	3200	4 x 5 1/2	36x3 1/2 36x5	W
Master, F	6	5440	4 1/2 x 5 1/2	36x6 40x6d	D	Samsen, 25	2 1/2	2195	3 1/2 x 5	36x3 1/2 36x5	B	Ultimate, AJ	2	3450	4 1/2 x 5 1/2	35x5 36x5	W
Master Trac, T	6	3740	4 1/2 x 5 1/2	36x4 36x4d	D	Samsen, 50	5	2575	3 1/2 x 5	36x3 1/2 36x5	B	Ultimate, B & BL	3	3750	4 1/2 x 5 1/2	36x4 36x4d	W
Maxwell, 1 1/2	1 1/2	1332	3 1/2 x 4 1/2	32x3 32x4	W	Sandow, I	1 1/2	3175	4 1/2 x 5 1/2	36x4 36x7	W	Union, F	2 1/2	3150	4 x 6	36x5 36x8	I
Menominee, HT	1	2030	3 1/2 x 5	34x3 1/2 36x5	W	Sandow, J	2 1/2	4095	4 1/2 x 5 1/2	36x5 36x5d	W	Union, H	4	3975	4 1/2 x 6	36x6 36x10	I
Menominee, H	1 1/2	2725	4 x 5	36x3 1/2 36x5	W	Sandow, L	5	4775	4 1/2 x 5 1/2	36x6 40x6d	W	Union, J	6	5400	5 x 6	36x6 40x14	I
Menominee, D	2	3245	4 x 6	36x4 36x4d	W	Sandow, M	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x4d	W	United, A	1 1/2	2445	3 1/2 x 5 1/2	36x3 1/2 36x5	I
Menominee, G	3 1/2	4270	4 1/2 x 6	36x5 36x5d	W	Sandow, N	5	4200	4 1/2 x 5 1/2	36x5 36x5d	W	United, B	2 1/2	3150	4 1/2 x 5 1/2	36x4 36x7	I
Menominee, J	5	5450	4 1/2 x 6	36x6 40x6d	W	Sandow, 25	3 1/2	5100	4 1/2 x 5 1/2	36x5 40x6d	W	United, C	3 1/2	3975	4 1/2 x 5 1/2	36x5 36x5d	I
Moline, 10	1 1/2	2250	3 1/2 x 5	34x5 36x6 1/2	I	Sandow, 50	5	....	4 1/2 x 5 1/2	36x4 36x7	W	United, V	5 1/2	5100	4 1/2 x 6	36x6 40x6d	I
Morland, 20N	1 1/2	2850	3 1/2 x 5	35x5 36x6 1/2	I	Schacht, 2-Ton	2	....	4 1/2 x 5 1/2	36x4 36x4d	W	U. S., N	1 1/2	....	3 1/2 x 5	36x3 1/2 36x5	I
Morland, 20B	1 1/2	3125	4 1/2 x 5 1/2	36x2 1/2 36x6	W	Schacht, 2 1/2-Ton	2 1/2	....	4 1/2 x 5 1/2	36x4 36x4d	W	U. S., NC	2	....	3 1/2 x 5	36x3 1/2 36x5	I
Morland, 20C	2 1/2	3900	4 1/2 x 5 1/2	36x4 36x8	W	Schacht, 3-Ton	3 1/2	....	4 1/2 x 5 1/2	36x5 36x5d	W	U. S., NW	2 1/2	....	3 1/2 x 5	36x3 1/2 36x5	I
Morland, 20G	4	4975	4 1/2 x 6	36x5 40x5d	W	Schacht, 5-Ton	5	....	4 1/2 x 5 1/2	36x5 40x6d	W	U. S., NP	3	....	3 1/2 x 5	36x3 1/2 36x5	I
Morland, 20J	5	5350	4 1/2 x 6	36x6 40x6d	W	Schwartz, B2	2	2600	3 1/2 x 5 1/2	36x3 1/2 36x6	W	U. S., R	2	....	4 x 5 1/2	36x4 36x4d	W
Montague, 20	2	2325	4 1/2 x 5 1/2	36x4 36x8	I	Schwartz, C2	3	3200	4 1/2 x 5 1/2	36x4 36x8	W	U. S., S	3	....	4 1/2 x 5 1/2	36x5 36x5d	W
Mutual, 2A	2	3450	4 x 6	36x4 36x8	I	Schwartz, D	5	4900	4 1/2 x 6	36x5 40x6d	W	U. S., T	4	....	4 1/2 x 5 1/2	36x6 36x6d	I
Mutual, 2 1/2 AP	2 1/2	4150	4 x 6	36x7 42x9 1/2	I	Salden, 1 1/2A	1 1/2	2360	3 1/2 x 5	36x3 1/2 36x5	W	Valle, 46	1 1/2	1925	3 1/2 x 5	36x3 1/2 36x5	I
Napoleon, 7	1	1535	3 1/2 x 5	32x3 1/2 34x4	I	Salden, 2 1/2A	2 1/2	3425	4 1/2 x 5 1/2	36x5 36x10	W	Victor, A	1 1/2	2050	3 1/2 x 5	34x4 34x5	I
Napoleon, 9	1 1/2	1880	3 1/2 x 5	32x4 34x5	I	Salden, 3 1/2A	3 1/2	4175	4 1/2 x 5 1/2	36x5 36x10	W	Victor, B	2	2225	3 1/2 x 5	34x4 34x5	I
Nash, 2018	1	1895	3 1/2 x 5 1/2	34x3 34x4	I	Salden, 5A	5	5600	4 1/2 x 6	36x6 40x12	B	Vim 20	1 1/2	1355	3 1/2 x 4 1/2	31x4 31x4	W
Nash, 3018	2	2550	4 1/2 x 5 1/2	34x4 34x6	I	Salden, 5B	5	1160	3 1/2 x 5 1/2	36x3 1/2 36x5	B	Vim 30	2 1/2	1550	3 1/2 x 4 1/2	32x4 32x4 1/2	W
Nash, 4017	2	3250	4 1/2 x 5 1/2	36x5 36x5	W	Salden, 5C	5	1810	4 1/2 x 5 1/2	36x3 1/2 36x5	B	Vim 31	3	2475	3 1/2 x 4 1/2	35x5 35x5	W
Nelson, F1 1/2	1 1/2	....	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Salden, 5D	5	2985	4 x 5 1/2	36x3 1/2 36x6	W	Vim 22	2	3150	3 1/2 x 5 1/2	36x4 36x6	W
Nelson, F2	2	....	4 1/2 x 5 1/2	36x4 36x7	W	Salden, 5E	5	3415	4 1/2 x 5 1/2	36x5 36x7	W	Vim 23	3	3950	4 1/2 x 5 1/2	36x5 36x5d	W
Nelson, F3																	

MOTOR WORLD

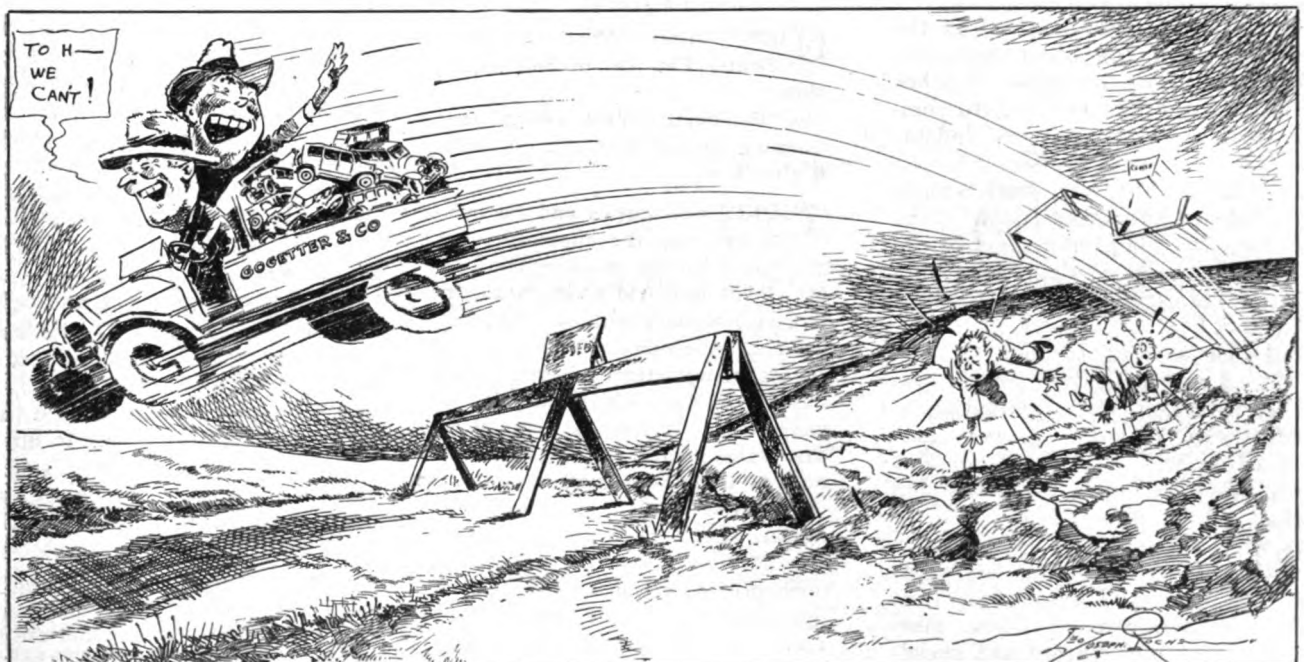
for
DEALERS, JOBBERS AND GARAGEMEN

Vol. LXVI

New York, U. S. A., Wednesday, February 23, 1921

No. 8

THE H--- WE CAN'T!



Read in This and Subsequent Issues, "How to Sell Cars, Trucks and Tractors—RIGHT NOW"

Let's Stop TELLING Other People to Go to Work

ADVICE in carload lots has been dumped on the doorsteps of retailers in the automotive business since the industry entered the readjustment period last summer. The burden of most of it has been: *Go to work!*

Now the automotive retailer, like any other sensible human being, is willing to take orders. But he is getting pretty tired of general orders. He is looking for specific orders. Not merely "Go to work," but "Go to work—this way," is the message which the dealer wants to get from his distributor and manufacturer.

This talk from on high—"Go to work"—has been spoken and written AT dealers so long that they are beginning to fire back at the talkers—"What are we doing now?"

THE average dealer is working—right now. He has been working for months. He has been worrying, too. Any business man finds it hard not to worry when his revenues are on the decline. The average dealer would like to make his work accomplish more and he has looked to his distributor and his manufacturer—often in vain—for help to do that very thing. The distributor and the manufacturer in a good many cases have been too busy writing words around the text, "Go to work!", to work out ways and means of showing the dealer how.

Isn't it about time for the industry, from the manufacturer all the way down the line to the retail salesman, to stop telling the fellow next below him to go to work? Isn't it about time for everybody in the industry to burn a little midnight oil, do some thinking and planning and pass on to the next man in the system of distribution some information which will tell *how to go to work?*

THERE are a good many things about the automotive business that are different from other businesses. The manufacturer, through

his district representatives, his branches and distributors and through the branch or distributor's traveling men, exercises quite a measure of intimate control over the affairs of the retailer. Exercise of this control, in turn, places, or should place, a responsibility on the manufacturer and on his agents all along the line to the retailer, to help the retailer shape and carry out his sales and service policies.

There are some factories which have done excellent work in suggesting sales and service plans for dealers and in furnishing dealers with business promotion material. There are others where the sales manager has been little more than a supervisor of allotments and the service manager a sort of glorified clerk of the parts department.

There are some distributors who have spent a great deal of time and money working out sales and service helps for their dealers and inducing the dealers to use them. There are others who have been little better than brokers, taking their commissions on dealer business and let-

Let's Turn Pulpit into Workshop — and HELP Them Work

ting the dealer tackle, single-handed, the task of winning and holding trade.

Both classes of manufacturers and distributors have been preaching the gospel of work and the former had a license to preach, but the latter will have to do a little practicing if they expect dealers to go on much longer listening to their sermonizing.

THE dealer wants to go to work—more effectively than he has been working. He acknowledges the necessity of discipline in a great industry as well as in a military organization. He won't resent being told to go to work if the admonition is only accompanied with some practical information as to how to do it.

There is a wonderful opportunity before the industry to-day to make itself into a business organization—a close-knit group of men co-operating in the making and marketing of a closely allied group of products. As demand starts with the consumer and, if an industry is properly organized, flows smoothly back through the distribution channels to the source of production, so plans for marketing an industry's products should have their origin with the maker, broadening and taking on detail as they progress on through wholesaler and retailer to the point of contact between the salesman and the buyer.

Dealers who may have taken things easy along with almost everybody else in the industry when the going was good have no illusions regarding the job ahead of them this year. Nobody need tell them they must go to work. They know it. They are going to do it. They are going

to carry on and carry through and make profits for themselves and for everybody concerned in the proceeds of the final sale of automotive merchandise. They don't have to be reminded that they will be called upon as never before to change people's minds—to make buyers out of people who are set against buying. They know it and, because dealers—the best of them—are human beings and therefore far from perfect, like all other humans, they want all the help they can get.

THIS is no brief for the dealer who declines to exercise either his brain or his legs in going after business. That sort of dealer—well, in most cases he isn't with us any more. This is no plea that the manufacturer and distributor do half the dealer's work or any part of it. It is, however, a serious suggestion that the merchandising ingenuity of manufacturers and distributors be exerted in every possible legitimate way on the problems of the dealer and that the fruits of such exertion be passed on to the dealer to help him over the 1921 hill.

Let's stop preaching.

Let's turn the pulpit into a workshop.

Let's invent ways to work and let the whole world share in the benefits of the invention.

LET'S get behind the work movement with co-operation instead of command.

Let's pull together, not just push the other fellow—in 1921.

Let's stop telling other people to go to work—**AND DO SOME OURSELVES.**

How to Sell Cars, Trucks and Tractors—RIGHT NOW

The Second of Three Stories on To-day's Market, How to Find It and How to Turn Its Buying Power Into Profits

By NEAL G. ADAIR

Story No. 2—What the City Dealer Can Do to Sell Right Now

THE first thing a city dealer has to do to sell right now is to BE ALIVE.

Just as the average person likes to associate with people who are cheerful, so does the average buyer—of anything—instinctively turn to the merchant whose store, stock and sales force radiate prosperity.

And if the prospect is not definitely in the buying class, if he is set against buying as the average automobile, truck or tractor prospect is likely to be right now, it is all the more important that he be approached in such a way as to supplant his pessimistic notions about

the immediate future with confidence that this great country of ours, his state and his city are going right forward into a state of lasting prosperity built on a foundation of sane, sound business.

All of which makes it necessary that the dealer, in the appearance of his salesroom, the tone of his advertising and the state of mind of his sales force, put on the front of a going-forward, prosperous business, ready and able to give service because of this very prosperity. A DOWN-AND-OUTER NEVER SOLD ANYTHING—AND HE NEVER WILL.

THE city dealer has always had a certain amount of come-in-and-buy business and he always will; but he can live, from now on, only on the business that he goes out and gets. His job right now and from now on is to find his market and convert it into profits. More specifically, what he must do right now is:

- 1—Find prospects.
- 2—Canvass prospects.
- 3—Close prospects.

Points 1 and 2 are inseparably linked. Finding prospects provides prospects to canvass and canvassing prospects produces more prospects. Closing them, as never before, requires exercise of that supreme quality of salesmanship—the ability to change people's minds.

1—Finding Prospects

Columns could be written about ways of finding prospects. Here are some: Canvass your list of owners; analyze the registration list of your territory to determine what cars in your class may need replacement and what cars in classes just above and below yours might, by salesmanship, be supplanted by your car; watch news of industrial, commercial and other enterprises getting into action again or expanding their activities after a dull period—coincident with such activities are heads of businesses, executives and employees with incomes getting back to normal and with buying power getting back to normal; keep up constant contacts with "live" prospects and sound them out at every opportunity for names of other prospects. Dealers gen-

The Story of the Story

In the introductory story in this series on Today's Market, printed last week, Mr. Adair said:

"THERE IS GOING TO BE A THRIVING BUSINESS THIS YEAR IN AUTOMOBILES, TRUCKS AND TRACTORS FOR THOSE WHO MERCHANTISE THEM.

"It is probable that total volume will not be as great as it was last year. And it doesn't need to be as great for the men in the business—manufacturers, distributors and dealers—to make money. They have all cut down their business expenses, from the manufacturer and big distributor who have eliminated their assistant so-and-sos and their purely decorative advertising to the small distributor and local dealer who have got rid of all sorts of non-essential but expensive people and things that hatched and grew like parasites while times were booming."

The story on this and the opposite page tells how city dealers can sell and **HOW SOME CITY DEALERS ARE SELLING RIGHT NOW.** Next week will be told "What the Country Dealer Can Do to Sell Right Now."

These stories, presenting a true picture of the opportunities in the automotive business for the current year, were based on a trip of investigation through eight states in the heart of the country.

erally find this personal source for new prospects most productive—one dealer is getting so many good names that he has found it necessary to increase his sales force, as he operates on the basis that 50 live prospects per salesman is all that can be properly canvassed.

2—Canvassing Prospects

Canvassing prospects has two features, preparation and routine. The first part of preparation is to get men who can sell—men who can change other men's minds. The next step is training—and no sales force ever completes its training. Once a sales force **KNOWS ITS PRODUCT**, so that the salesmen never have to hesitate or dodge in answering questions, the training task becomes one of keeping every man up to the standard of the staff as a whole. In this work the daily sales conference, which can be held the first thing in the morning, before the hour when prospects are "in," is of great value. Get the men together to exchange ideas and experiences, so that one man's method of landing a particularly obstinate prospect may be turned to the advantage of the others and so that a man still working on a "hard nut" may have the benefit of everybody's suggestions. Make these daily conferences in a measure a test of the salesmen's knowledge of the product and a means of building up enthusiasm and dispelling pessimism if it crops out.

Right preparation for canvassing, more than ever right now, calls for vigorous advertising effort. Salesmen's calls will be much easier—and much more pro-

ductive—if vigorous, cheerful, informative advertising in newspapers that your prospects read and by means of direct mail matter—circulars, booklets and personal letters—has partly prepared prospects' minds.

For the routine of canvassing, dealers who are selling right now are going strong on:

1—A full working day—a sales conference between 8 and 9 and the men on the go promptly at 9—with the territory districted and calls routed on the basis of a carefully kept-up prospect list to avoid waste motion.

2—Telephone appointments with prospects whenever possible, this also to avoid waste effort.

3—Demonstrations. The prospect who would buy a car a year ago on looks or a salesman's description demands, in today's highly competitive market, knowledge of the product based on a thorough try-out, a condition which applies to

trucks and tractors with equal force. And *dealers who are advertising demonstrations are getting more chances to make them and sell on the basis of them.*

4—Mail follow-up. The prospect ought to hear from the dealer, preferably in a personal letter accompanied perhaps by some sort of literature, the day after the salesman makes his call. And there should be systematic mail follow-up until the next call is made or the deal is closed.

3—Closing Prospects

Closing prospects is a task of individual salesmanship—every salesman does it in a different way and has a slightly different plan for every prospect, depending on the latter's interests, habits, temperament, etc. But there is one big obstacle to closing which will be in evidence throughout the year—financing. It is proper of course to try first to get cash—unless the circumstances indicate

that the attempt would scare the prospect off. The next move is to get the prospect to finance the purchase through his own bank. If this is impossible the dealer has recourse to his own bank, and if credit is not available there, to an acceptance company. It is well to remember that the objection to acceptance corporation rates so generally prevailing in the country is not generally as apparent in the city. The city man, particularly the small business or employed man who has been brought to the point of wanting a car or truck right now, will seldom balk, if properly sold, at time payment rates spread out over several months of the period when he is getting transportation returns out of his purchase.

Selling right now requires—well, it requires SELLING when you get right down to the last word. And as a background for selling in such times as these *look prosperous, act prosperous and YOU WILL BE PROSPEROUS.*

These City Dealers Are Selling—RIGHT NOW

J. H. HANSEN CADILLAC Co., OMAHA.—Though merchandising a high priced car, the Hansen sales force is not letting dignity interfere with digging. The Hansen salesmen are continually on the trail of prospects. They go strong on demonstrations and when prospects are reliable and know how to drive the salesmen loan them a car for a day. "Just use this car to-day and then tell us how you like it," is the suggestion to a business man, for instance, who has to get around quite a good deal during business hours and who may head homeward a little early to give the family an outing. As Hansen has no active dealers just now in the immediate vicinity of Omaha he is watching the trips to town of outside prospects. Salesmen meet these people at their hotels, loan them a car or offer to take them about town on the day's business or recreation and thus pave the way for sales arguments. The Hansen company is getting results from its local advertising, which is being strengthened, rather than curtailed during the present period. Hansen says: "We have been able to go through the so-called 'storm' without having found it necessary to reduce wages or the size of our sales force. We are spending more for advertising than in any other winter season. We believe money judiciously spent now will put us before the people and the real rush of spring business will come to us earlier as the result of our efforts."

PAYNE MOTOR Co., PAIGE, MINNEAPOLIS.—The Payne sales force is utilizing every means of enlarging the prospect list, on the theory that out of every batch of names are some people with power to buy. At show time and since cards have been given out entitling "the bearer" to a demonstration. There is a temptation for almost anyone in an invitation to a free ride in a brand new car and while some mere curiosity seekers have taken advantage of the offer, more have been people with the inclination—and the means—to invest in an automobile now or later on.

VESPER-BUICK AUTO Co., BUICK, ST. LOUIS.—This company engaged a man to be service manager and sent him out to solicit service business from Buick owners. He got some service orders BUT HE ALSO SOLD SOME CARS. So the would-be service manager is staying on the sales force and getting business right along. Now the Vesper sales staff is personally canvassing the entire registration of Buick owners in the territory and making sales for immediate and spring delivery.

G. M. C. MOTOR TRUCK Co., KANSAS CITY.—The sales force working under Estel Scott, distributor, has been plugging away on its canvass of prospects listed vocationally, regardless of the fact that sales of trucks have not been easy or frequent in the Middle West in a long time. As a result Scott has had a notable share of what truck business there has been. The Scott plan is never to sell a truck until the prospect's transportation requirements have been analyzed, a plan which has built and is building re-sale business. The Scott prospect list shows almost every business house in Kansas City that may be in the market for a truck and what type of truck it should have. When the prospect enters the market the Scott salesmen know it, so thorough is their canvass, and they are ready to begin talking about the truck he ought to have.

WILLYS - OVERLAND, INC., TOLEDO BRANCH.—L. G. Peed, branch manager, is cashing in on owner good will. Taking pertinent statements from testimonial letters of well known Toledo people, giving reasons why they like their Willys-Knight and Overland cars, Peed is running a series of newspaper ads which are bringing in inquiries and giving the salesmen new names to work on.

R. P. RICE MOTOR Co., FORD, KANSAS CITY.—One Thursday morning a little while ago Rice put some literature in the mail. The next Wednesday his salesmen, who had their prospect lists worked "to the bone," had more names than they

could handle. The literature was an announcement that Rice would sell Ford cars or trucks on this basis: Five dollars a week—or more if the prospect preferred—until one-third the list price had been paid. Then the purchaser could take the car and have twelve months to pay the balance. During the pre-payment periods the payments would bear interest at 6 per cent, which the purchaser could apply on the balance or take in cash when he took possession of the car. "Your money back on request, with accrued interest, any time you wish if, for any reason, you do not want a car," was Rice's final offer, with the additional suggestion: "Call us by telephone or drop us a card. Our representative will see you days or evenings, at your office or home, and go over our plan in detail." It has been a new world for the Rice salesmen since the plan was inaugurated. Many people in modest circumstances have been brought to the conclusion that, after all, they may be able to have a car this year. Anyway, they are saying, they might as well aim at it—and when people aim at something they want, they usually get it.

TOLEDO HUDSON-ESSEX Co., TOLEDO, OHIO.—This company is using system in its service department to build resales. Following every repair job in the service station a letter is sent to the car owner, asking whether the work was satisfactory and requesting a call by the owner to talk things over if anything is wrong. These letters bring into the office many owners who otherwise would never come into personal contact with the executives, some dropping in to express appreciation of the work done and others to talk over adjustments or repairs which they think should have been handled in a different way. These personal contacts enable the executives to get first hand information about the owners' desires in the way of new or additional cars and pave the way for work by the salesmen which is resulting in a satisfactory number of sales.

How Some Dealers Feel About the Dealer Contract and Policy

On These Pages Motor World Presents a Few of the Many Letters That Have Arrived Since the Articles on the Dealer Contracts Have Appeared

FOR many years there has been a certain degree of dissatisfaction in the trade because of the policies of factories and the contracts between factories and dealers. Until the annual meeting of the National Automobile Dealers Association this year little had ever been said on the subject and not many dealers had felt it judicious to take the matter up with the factories.

Because of this reticence there are executives in manufacturing circles who hesitate to believe that there can be any great dissatisfaction on the part of the dealers, and the letters on these pages are printed simply to indicate to the industry that the subject is big and important and in need of attention. Its seriousness cannot be denied. The bitterness that has crept into some of these letters but serves to emphasize the regret the industry should feel that any sentiment of this kind should ever have been allowed to supplant the kindest of feelings and the most enthusiastic co-operative effort.

THE letters that follow are a few of those that Motor World has received since it began to touch upon the subject of the dealer contract, and it is significant that invariably the writer asked that his name be held in strictest confidence. The writers of these letters represent the cars of the oldest, biggest and best factories in the business to the number of a score or more.

This Is Clean-up Time

Editor Motor World: Your courageous article regarding the dealer's contract is one that should bring the heartiest thanks and strongest support from every dealer.

The larger the dealer's investment and the greater his interest in his business, the less he dares point out the injustice he suffers at the hands of the manufacturer. In any other business a trader may, by diligent effort, build up good will that can appear as an asset in his balance sheet and become of marketable value. In the automobile business good will is largely represented by the amount of money a dealer will spend to make good faulty factory assembly.

Bankers have not to be sold on the automobile's utility to finance a dealer, but they require a lot of selling on the manufacturer's fairness of trading and the value of his contract.

If your readers have not experienced the sickening sensation of watching their business edifice totter, their sense of fair play shattered and all their efforts for achievement nullified by the "policy" of a big-stick-wielding corporation, or the

personal grudge of a sales manager, they must at least know of some neighbor who has had that experience.

Manufacturers have unctuously told the dealer he must clean house. To give force to their advice, strong-arm methods are easiest indulged in. Yet, in return for good advice, do they set an example? They recommend the dealer to advertise more extensively, indulge in every kind of a campaign to get sales, reorganize and clean up regardless of cost. But we do not hear of them offering better terms, larger discounts or a more stable contract; rather, they cut down. The dealer must turn a complete somersault to meet changed conditions, but the old conditions can still prevail with the manufacturer.

The feeling of discontent with the dealer is not mild; it is bitter in the extreme—and it is universal. He does not complain because he dare not. He does not get out because he loves his business and his heart is in it, and because he is an optimist (he would not be an automobile man otherwise). He thinks that some day he, as a customer of the factory, will get the same square deal that he gives to his own customers.

The first manufacturer of a reputable and popular car that gives a contract that is stable and an honest-to-God asset will have the pick of the country's business men hiring aeroplanes to get to his door quickly. The manufacturer may not think so but the dealer is the most important part of the industry. If he is not of a higher business average it is the manufacturer's fault only.

The manufacturer has shown only one desire and that is to build as many cars

as possible and then unload them. If he would devote his energies to building up a dealer organization of sound business men only and protect their investment by fair trading contracts his sales problem would be solved. As well, he would obtain a valuable asset which he does not now possess, viz., *loyalty* in place of self-interest and silent antagonism.

Many dealers do not even realize themselves how strong is this fear of and antagonism to the manufacturer because of his methods. It is a festering sore holding back sales efficiency and results far worse than any so-called buyers' strike or prevailing conditions.

This is clean-up time; more power to your elbow if you can clean the outside as well as the inside of the pot. But talking must be followed by action.
—Canadian Dealer.

Change Is Needed

Editor Motor World: The article referring to Dealers' Contracts in the January 19 issue is certainly right to the point. It refers to conditions that are only too true and, unless they are corrected, the automobile industry will never be an attraction to men of good business judgment and ability. To cite our own case: We have been established about twenty years and during that time have handled many prominent makes of automobiles.

For eight years we sold the _____ cars, but about a year ago they suggested that we take on the _____ along with the _____. For business reasons we refused and, as a consequence, they cancelled our _____ contract by letter, same

taking effect forty-eight hours after. Later they placed the ———, together with the ——— agency, over to another local concern. No reason or explanation whatever for this action was ever given us.

We have represented the ——— truck for several years, but last February they notified us that they were going to cancel our contract, as some other party in town had agreed to guarantee them a certain amount of business. We offered to meet these conditions if it was a bona-fide offer, but they refused to consider our proposition and cancelled our contract the following month. Our rebates of several hundred dollars, which were coming to us if our contract had lasted the full term, were accordingly lost and saved to themselves. We later discovered that they had placed the agency with a local trucking concern. In talking with the manager of the concern directly after they had secured the agency he practically admitted that they had only signed up to enable them to secure new trucking equipment at a lower, or trade, price.

Again, we have represented the ——— cars for about three years with very good success on the same. Early last fall they asked us to put several cars on the floor which we refused to do. Our salesmen, knowing these facts, then talked the matter over with the distributor and secured the financial support of another party and practically agreed to do whatever they required. Result—another agency changed hands over night.

Another prominent make of car we have handled for about fourteen years until the factory stopped manufacturing the same. After the war was over the factory resumed operations and we found that all our former territory had practically been taken over by another party who lived over fifty miles away, and it would be necessary for us to do business through him on this particular car. This action on their part was taken in spite of the fact that we had sold every car of that make in our county and had been making applications to them to represent their car again whenever it was ready to be placed on the market.

In all these experiences the question of finances has never been mentioned, no complaints as to the service given to our customers and very little, if any, to the amount of sales we have secured for them has ever been mentioned.

The distributors simply fell for a lot of cheap talk and promises of what the new representative would do if they would only turn the agency over to them.

We cannot help but feel that, after nineteen years' experience, the sales manager and distributor does not care very much what calibre of men handle his product or the way he treats his cus-

tomers, only he must produce a volume of sales and adopt such methods of sales ideas and expense as they (the distributor) suggest.

More proof of this assertion is the agitation that has been going on for some years past in regard to large showrooms with big plate glass windows which must be located on principal business streets. This is an expense which has been forced on many dealers who had already been very successful in distributing their cars.

Next Week—A Dealer Contract You Will Want to Read

IN next week's Motor World there will be published a copy of a contract already in force between a manufacturer and a large percentage of his dealers, establishing PERMANENT manufacturer-dealer relations.

After considerable study of contracts Motor World believes this is the fairest and best it has seen—and with it is a policy that bases factory success on dealer success.

Along with the contract Motor World will present an interview of the factory sales manager who is responsible for it, in which he discusses the contract in detail.

Motor World believes that the general adoption of a contract and policy of this kind would eliminate many of the differences that have existed for years between dealers and factories.

Watch for this story next week.

After such experience we are tempted to ask ourselves "Why do all this work and give over time and money to build up a business if the same can be taken away over night?"

What, then, becomes of our customers whom we have been trying to please for years? What of the free service given to them and complaints settled to their satisfaction, very often when they have no just claim whatever? Where do these customers go? Do they stay with the dealer who has given them good service? What becomes of the dealer? These are the natural conditions resulting from such a condition, and we have very little doubt but what there are others who could tell the same kind of story.

We might go on mentioning such things as these in regard to tires and other automobile accessories connected with the automobile business, but we are content to let this article rest just as it is and allow your readers to consider these matters for themselves.

You are at liberty to use this letter as you see fit, but we would rather you would not use our name, and also omit the names of the different cars we have mentioned, as we do not care to antagonize these people in any way. We have given you the names to prove our statements—Eastern Dealer.

Old Contracts One-sided

Editor Motor World: With a great deal of pleasure did I read your article

in the January 19 issue of Motor World, and the article written by a Canadian dealer and published in the January 26 issue, on the dealer's contract with manufacturer.

My experience as a dealer in automobiles extends over a fourteen-year period and in this time I think I have learned a great deal about the business. I think you have hit the nail on the head in your article of the 19th when you say that the dealer does not always talk with love and reverence about the factory heads or sales managers. I sometimes think that factory heads and sales managers do not fully understand the dealers' problems. Contracts in the past, usually, were written in an extremely one-sided way. The usual contract provided for a certain territory wherein the dealer should resell cars bought from the manufacturer, but the manufacturer will not guarantee this territory to the dealer exclusively. In other words, there is no protection against other dealers selling the same line of cars in dealer's territory. If the same make of car was sold in dealer's territory the contract invariably has in it a clause whereby the dealer has no recourse against such territory encroachment, hence must stand the loss of business to which he is entitled.

Usually contracts have attached to them a shipping schedule whereby a dealer agrees to buy and pay for a certain number of cars each month. This shipping schedule is very often made up with utter disregard of conditions in territory covered by such dealer. The result is the dealer finds it, in many cases, very difficult to arrange the finances with his banker in order to secure a sufficient line of credit. If the dealer does not succeed in getting a line of credit, his notes given to his banker will come due, possibly in March, on cars bought during the winter months, and, if weather conditions are unfavorable and the season opens late, the dealer becomes cramped for funds and very often becomes desperate and, in order to turn some of the stock of cars, will sell them, regardless of profit. Used cars are taken in with utter disregard to their value or what they can be sold for again. If no trade enters into a deal, in order to induce selling prices are very often cut to such an extent that no profit is left to the dealer.

In visiting other towns I have often called on bankers to get from them their views of the automobile industry, and I find that the average banker is surprised at the utter disregard that so many manufacturers show toward the dealer, until now a great many bankers here in the Middle West are afraid to extend a line of credit to a dealer on account of the uncertainty of the manufacturer's attitude toward the dealer, and that because there is no guarantee on the part of the manufacturer or liability in case manu-

facturers choose to lower prices, change models or do a number of other things that would make it impossible for a dealer to sell a manufacturer's cars at a profit. Bankers further severely criticize the attitude of manufacturers insisting on deposits with interest on dealers' contracts. From experience in other lines of business I am led to believe that if manufacturers in some other lines would ask their dealers to put up deposits such as automobile dealers are asked to do they would never get any dealers to stock and sell their goods, and the time, in my opinion, is very near when deposits will be eliminated. Dealers have been bankers for the manufacturers long enough. If the automobile industry is to get on a firm basis, dealers in the future will have a voice in framing their contracts with manufacturers.

If the automobile business is to prosper and merit the confidence of the public in general automobile dealers will have to be real business men. Their place of business will not only be a sales office, but will have connected with it a first-class service station, where the dealer employs competent mechanics who know and will give service to automobile owners. The curbstone dealer is practically a thing of the past, and no automobile manufacturer need expect flourishing business in any community when no service station is provided for the owner of his cars. If a so-called sales office or curbstone dealer does sell a few cars in one year, owners without service on their cars will not do much advertising for him.—Veteran Dealer.

P. S.—Please omit name if you desire to publish this letter.

Better Price on Winter Shipments

Editor Motor World: Your leading article, *The Dealer's Contract*, in Janu-

ary 19 issue is just what a lot of us have been looking for.

Manufacturers can talk about their millions, but the great mass of dealers do not make money, therefore they are dissatisfied. They try to build up a business on a contract which is nothing but a gentlemen's agreement.

A dealer hesitates to put a \$5 sign on his window because he may have to rub it off before the season has passed. Of course, the manufacturer thinks he is right and the dealer thinks he is right—and such things lead to trouble if the two don't get together.

Any large factory must run on a schedule, to be sure, but is there any good reason why a dealer in a Northern State should be obliged to take a schedule in December and January, February and March and carry all these cars until May or June? The dealer should bear part of this burden, but it isn't fair that he should bear it all.

A factory can run more economically during the winter months because the laboring man must stick to his job. The dealer, therefore, should have a better price on winter loads.

There are many other propositions that should be discussed.—Mid-Western Dealer.

Thinks Distributors Too Independent

Editor Motor World: Your article in the issue of January 26 should create a hearty response, for now you're talking. You certainly said something regarding the dealer's contract. We have found the dealer's contract rotten for some years past, but it did not help any to kick about it; either take it or leave it. There were others that wanted it, and the distributors were as independent as a hog on ice. While the manufacturers were distributing profits and bonuses to their

employees, the agents were wondering when the next big cut in cars and tractors was to come, with no protection.

Some of our experiences have been disheartening. Previous to August 1, 1920, we did not handle the "Knoxon" tractor, but we were notified that we would have the sale of them after that time and we should order a carload, expecting, of course, that the price would be the same as if we waited until after the 1st. We received the load at the old discount, and on August 1 the discount was increased; jolt No. 1.

The fall was very dry and we were unable to sell any tractors, except one to a well man for his rig. In a short time along came seven more tractors; jolt No. 2. Of course, now that we were pretty well loaded up, the price had to drop; jolt No. 3. By that time the selling season was over and we carried the bunch of tractors into the winter, paying interest on the money, insurance (and taxes before disposed of), only to receive real jolt No. 4 in a price drop of over 20 per cent. When we sell seven more tractors, besides what we have on hand, will be pretty close to even on the year's tractor business, provided we don't find ourselves in the sheriff's hands by that time. We are constantly reminded that if we don't dance and do it lively, too, that they will find someone who will. If you should use any part of the above do not use our name or location.—Another Dealer.

An Association Writes

Editor Motor World: Accept our congratulations for the wonderful article you published in the *Motor World* this week. Every dealer here and in this territory is with you. You have struck the keynote and we are all listening for more.—Dealers' Association.

Real Selling Assistance Given These Dealers

How One Truck Sales Manager Helps Sell His Factory's Trucks

CONSIDERABLE development in the extension of manufacturers' sales assistance to dealers has been noted since the change in the conditions surrounding motor car and truck selling in the past few months.

The forms of assistance extended have been as diversified as the products distributed and many real helpful plans have been inaugurated. Among those that stand out particularly for the manner in which they render real concrete assistance is the one compiled for Standard motor truck dealers by Walter R. Howell, technical advertiser and merchandising man. It consists of a series of folders, each one devoted to a special selling point of the truck and directed to

specific vocational divisions of industry. With this service is a folder containing ten standard sales letters entitled "Ten Standard Motor Truck Salesmen." The series is grouped to give the prospective motor truck buyer the concrete facts so that he will be guided by sound business fundamentals in the selection of a truck. They cover the following subjects:

1. Organization
2. Prestige
3. Satisfaction service
4. Operating cost.
5. Permanent dependability
6. Continuous service.
7. Resale value
8. Standardized unit

9. Testimonials of users
10. Co-operation in getting the right truck.

The letters are accompanied by instructions as to the selection of letterheads, style, form of address, etc. They are in such form that a dealer may hand the folder to a stenographer with a date upon which each letter shall go forth, and furnish the stenographer with sections of the prospect list to be canvassed and know that a progressive selling effort has been gotten under way. Using each of the letters as marked, they may be copied on the dealer's letterheads and sent out according to instructions contained in the folder.

Louisville Show Inspires **OHIO VALLEY DEALERS IN GREATER MERCHANDISING EFFORT**

*Well Planned and Effectively Advertised Exposition
Awakens Public Interest and Starts Buying*

By CHARLES C. SWEARINGEN

LOUISVILLE, Ky., Feb. 23.

UNDER conditions rich with promise, and with one of the most comprehensive exhibits of motor vehicles and accessories ever collected south of the Ohio river, Louisville's Thirteenth Annual Automotive Show opened Monday evening, with sixty-six exhibitors sharing the Armory. Interest in this event has been growing to such proportions for the past three weeks that the management believes even its fondest hopes for the outcome of the ex-
position will be surpassed before the doors finally close.

The exhibits far outclass those of previous shows in beauty and excellence of material. In this respect the dealers have outdone themselves this year. Many have made trips to the national shows in New York and Chicago to obtain ideas for their exhibits here, and the results of their endeavors are noticeable. Special show features are the rule rather than the exception, as accessory and motor car dealers have obtained special layouts.

THE exhibition is the opening broadside fired by the combined automobile companies in the yearly sales campaign. It is really the start of the new season's business in this section of the Ohio Valley.

Despite eight inches of snow—the heaviest of the winter—a larger and more enthusiastic crowd visited the show on the opening night than on any previous first night. The dealers have spent money freely this year, the expense of the show being more than \$35,000.

While none of the dealers expects to sell as many cars at the 1921 exhibition as in former shows, the majority of them had reported the sale of one or more cars on the second day of the show. Everyone is optimistic, for the visitors are intensely interested in the exhibits and a greater number of good prospects are in attendance than in the past.

The automobile retail business in the Ohio Valley has started on an upgrade. The lowest point of the natural post-war depression was left behind in November and was weathered satisfactorily by the dealers. This is a condensation of the views of dealers here. Business last year was as good as could have been expected. The average dealer hasn't made much money during the last four months. Some have lost money. But it's getting over now. The pit of the business depression came in November. The outlook is satisfactory now.

In the Armory, with its large floor space, high ceiling, absence of posts,

broad balcony and its 62,000 square feet of floor space, Louisville has an ideal building for the display of automobiles.

Italian art has been utilized this year to effect an architectural transition of

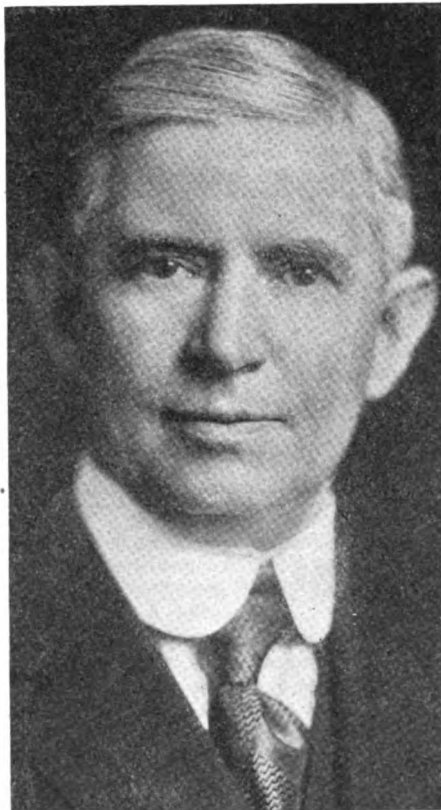
the otherwise somber military hall. The pergola is the motif that prevails through the building. Each booth in the Armory represents a small pergola, so arranged and decorated that the general effect of all the booths represents one large arbor of trellis work, in which each booth is a cedar-covered bower. Mahogany and white is the color scheme of the entire ground floor.

The ground floor is divided into three sections with passage ways for visitors, along each side of which the booths are placed. The passages are marked by colonnades of mahogany and white, twenty-five feet in height, surmounted with urns of evergreens. Eight electric lights adorn each post. Between ten columns this size there are twelve columns, fifteen feet in height, similarly decorated and lighted. Boughs of cedar sprays hang from column to column.

A glass dome, forty feet square, is raised over the center of the building, from which forty festoons of streamers covered with electric lights and decorated with smilax are draped to the tall columns on the balcony. The dome or sky window is colored and so illuminated that it floods the entire building with light, giving the effect of sunlight streaming through stained glass.

The growth and increasing success of Louisville's automobile shows is due in a large measure to their sponsor, the Louisville Automobile Dealers' Association. The history of the two are interwoven, as the association is rarely active except in connection with the annual exhibition. Yet while it is true that the show is the most prominent of all the works of the association, the history of the latter goes much further back than the show and covers a far greater scope of general activity. Louisville's first automobile show was held in the old Coliseum Building in 1911. The exhibition

The Leader



Prince Wells, president of the Louisville Automobile Dealers, under whose auspices the show was held

was not large or pretentious, but it was successful.

It is the fixed policy of the Louisville Automobile Dealers Association, according to one of its members, to regulate the quality of the membership by refusing admission to any concern which does not fulfill a certain standard of reli-

is also the owner of a newspaper in a Southern Indiana town. The copy this year has reached high-water mark, and has been the subject of much favorable comment among business men generally, not alone in Louisville, but in other sections of the country. The character of the copy has been somewhat unusual in

Louisville Show Adds SOLD Car Utility

The Automobile Increases the Efficiency of All Classes of Workers

Some interesting figures have just been made public. They deal with the increase in efficiency which the general use of the automobile has made in the lives of men in all occupations.

Here is the list:

Real Estate and Insurance	113 per cent
Doctors	104 per cent
Salesmen	103 percent
Clergymen	98 per cent
Country Superintendents	72 per cent
Farmers	68 per cent
Contractors	51 per cent
Manufacturers	33 per cent
Bankers (including rural)	33 per cent
Merchants	25 per cent
Lawyers	23 per cent

Think what it means to an individual to have his efficiency, the service which he renders to the public, more than doubled, to say nothing of having his earning power and his buying power correspondingly enhanced.

In the list shown above almost every activity is taken into account. The farmer increases his productivity 68 per cent, and that is a prime consideration in these days when an inadequate food supply may easily happen, with higher prices and even hunger as a result.

This, as it is exemplified by the automobile, can be studied at close range and under the most favorable circumstances at the Louisville Automobile Dealers' Thirteenth Annual Show, to be held at the Armory on February 21-26, 1921. Here the latest and best in the industry will be grouped for your inspection.

The doctor is called many times in an emergency, and always because of pain or suffering. Any agency that saves his time and brings him to his task fresher, more vigorous and more capable is as indispensable as the physician himself. And so on down the list.

Modern day life is so complex, so dependent upon a multiplicity of men and methods, that anything that contributes in any way becomes of increasing importance. It is becoming daily more necessary to give intelligent study to what is transpiring in every field of activity, and nowhere has this study been more fruitful than in the development of transportation.

This Advertisement is No. 4 of a Series.
No. 5 Will Appear Friday, February 16.



There was real educational value, and a real sales resistance attack in the Louisville show advertising. A series of ads such as shown here directed public attention to the utility of automobiles and brought the show into the picture effectively

ability, and which has not been established a sufficient length of time to insure permanency in the trade.

For this reason membership in the association has always been a guarantee of business integrity.

For the third successive year the advertising and publicity for the show has been handled by one of the members of the association, William O. Portsman, manager of the Leyman Motor Co., who

that it advertised constructively the automobile industry as a whole and treated the show almost as a secondary consideration, combining facts, figures, logic and sentiment. The advertising has made a wide appeal. There were 114,228 motor vehicles registered in the Bluegrass State last year, a gain over 1919 of 24,038 machines.

1920 motor vehicles are classified as follows:

Passenger cars	99,426
Trucks	13,259

Quick reaction from the recent depression in the automobile business and a renewal of demand by the summer months were predicted at the first annual banquet of the automotive dealers of Kentucky and Southern Indiana, as guests of the Louisville Automobile Dealers Association at The Seelbach Tuesday night.

The dinner was attended by approximately 400 automobile dealers, business and professional men. Prince Wells, president of the Automobile Dealers Association, who left a sick bed to be present, was in charge in opening the program and announced that the banquet would be made an annual affair in connection with the show. Speakers included George M. Graham, vice-president of the Pierce-Arrow Motor Car Co., of Buffalo; Harry S. Leyman, president of the Leyman-Buick Co., of Cincinnati and Louisville, and George C. Hubbs, general manager of the Grant Motor Car Corp., of Cleveland. William A. Thomas, vice-president of the local dealers' association, was toastmaster and introduced the other speakers.

The speakers were optimistic in their prophecies for the future and advised the dealers that the only thing necessary to insure success in business is to have faith and a determination to succeed.

Taking for his subject "Making the 1921 Grade," Graham told the dealers that conditions will soon be better and warned against any "shift in the gear" as they approach 1921. "Business men are needed to-day," Graham said, "who can sell this country to its people solely on its merits."

Closer Relations Advised

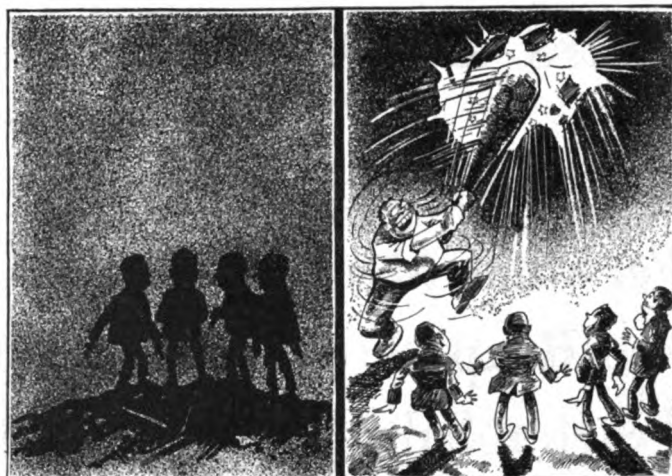
Graham was followed by Harry S. Leyman, Cincinnati, who spoke on the problems of the Kentucky dealer. Leyman declared that dealers of this state have smaller stocks of cars on hand now than at any time in the last three years. He predicted that by May or June the trade would have revived to such an extent that dealers would be unable to fill orders. The last speaker was Hubbs, who spoke on "Ethics and the Motor Car Business." Hubbs set a high standard for both the manufacturers and dealers as well as salesmen of automobiles, and said that in his opinion the industry had suffered during the past two or three years from what he termed "sloppy" methods and morals.

Dealers have a right, Hubbs said, to expect that cars will be as good as the manufacturers say. On the other hand, he said that the manufacturer has a right to expect dealers to be high-class citizens in the community. Closer relation between the dealer and manufacturer as well as the dealer and salesman was urged by Hubbs, who said the day is past when one man in the automobile business can live for himself alone. He said this is an age of co-operation, and that the lessons of the war would be learned in vain if the manufacturers and dealers in automobiles fail to profit by experiences gained from the war.

Wanted—

A Few More Roosevelts In Business

By RAY W. SHERMAN



"WELL," said Tommy Trumbull, manager of C. J. Reilly, Inc.,—without any accent on the ink—"it's beginning to move out in the country."

"Wholesale orders this morning?" queried Reilly, head of the house which sold Sennetts in and about Callawassa.

"Yes," replied Tommy, "some last week, some yesterday, some to-day, and I hope some to-morrow."

"That's fine! Crêpe's disappearing from the door all right! And it's about time. If we'd all decide to have the sun shine we could make it shine—at least, quite a bit more than it is."

"There's a lot in that," said Tommy. "Sometimes I wonder at the human race and all its varied characteristics. It surely is a funny bunch of folks. First we're up and then we're down. Some of us are always going ahead and some of us seem always to be going backward and some of us just drift around with the tide. Some of us can always see sunshine ahead, some of us can never see anything except the storm that we know is bound to come, and some of us don't seem to care whether it rains or shines. Sure is a funny bunch."

"You said a lot then, Tommy," and Reilly wheeled around in his chair to look squarely at his manager. "You said more than you realize. The human race is just like the output of a motor car factory. Some are good, some are pretty punk, and the big run is just average. And if you can increase the number of good ones you pull the average up to the point where the poor ones aren't so much noticed."

"You know, Tommy, what we need now more than anything else?"

"What?" asked the manager.

"Just—a few—more—Roosevelts—in business!" Reilly declared, and with every word he thumped the desk with his first. A Big Stick could not have made the assertion much more emphatic.

"Roosevelts?" queried Tommy.

"Yes, men of the Roosevelt type!" Reilly repeated. "We need a few more leaders of the type that gets things done, that takes the lead, that tackles jobs that can't be done, that cuts

the red tape, that is always leading the people in the right direction without regard to precedent or circumstances or conditions. If we had a few more men of that type we'd be having an automobile business to-day instead of wondering when it would be back to normal.

And Other Dealers Said: "Impossible"

"That Colt dealer from Red Rill, who was in here the other day, is the type I mean. That bird is doing the things that other people thought were impossible. And, more than that, he's leading a lot of other people in doing the job they thought nobody could do. How many people in Red Rill thought there could be such a thing as an automobile show in that section this year until this man told them all there was GOING TO BE ONE. And then he told them all what to do—and they did it—and he's got the whole town trailing him around asking what to do next.

"And then there's Burtling, over in the south country. He was selling cars last spring and doing well. And then came the credit restriction. And the bankers told him he couldn't sell cars—and he said to h—he couldn't. And he went to the people around there and began borrowing their money to finance his deals at a better rate than they could get for it at the bank; and he SOLD CARS—AND TRUCKS—AND TRACTORS.

"And there's the Sennett dealer out in West Sayanna. The bottom went out of his market in September, and they told him he couldn't sell cars, and he said to h—he couldn't. So he fired every salesman who said he thought cars couldn't be sold and he went to work himself, with the salesmen he had left, and they just called, called, called and sent out sales letters, and had shows in their salesroom and did everything under the sun—and they SOLD CARS.

"And then, there was the Sayanna Dealers Association, which met to discuss the advisability of holding a show, and most of them said it was a bum

year and it shouldn't be done until old Bill Dones got up and just fired enthusiasm into them for an hour, with sweat running down his face, and when he got through they all got up and yelled, and last week they did the thing that couldn't be done.

"Tommy, all this country needs in business, in politics, church circles or any other place is aggressive leadership. The world is standing with open arms waiting for the man who will come and lead it into doing the things it wants to do but doesn't know how to start.

"What do you suppose the result would be if every man in this business were to get up to-morrow morning and bat in the eye the first man who told him cars couldn't be sold and that business wouldn't come back for months and months? Why—say boy—if that thing happened and all the automobile men in Callawassa were put in jail to-morrow for assaulting calamity howlers, the biggest cheer you ever heard would go up and the whole town would be down the Row the next day to see what manner of men these were who hit a man who said business wasn't good.

"And, if some man would get up in the Chamber of Commerce meeting to-morrow with a ring-dinging speech and a plan for the restarting of business, the whole town would cheer him and follow him, and the parade would be started in the direction we want it to go.

"And if every head of every automobile house in the country would elect himself a cheer leader, a master of the situation, a Roosevelt, if you please, and begin at once to follow through his own assertion that business is going to be good, beginning to-day, why, Tommy, the job would be half done. And a man doesn't have to be the head of a business to start himself up and be a leader—especially in optimism and action.

"Tommy," Reilly asked, "do you know what this type of man would do in these clouds of gloom?"

"What?"

"He'd take his old stick and just bust holes in the cloud and MAKE the sun shine."

This Dealer Became a Farmer—

Sowed the Power Farming Idea and Reaped Tractor Sales

A Story of How the Universal Motor Co. Sold Tractors in Virginia

Farmer Pupils Cutting Wheat on Fordson Farm



The Universal Motor Co., Richmond, Va., went into the farming business to demonstrate power farming. Farmers learned to operate tractors and power equipment, learned the economy of power farming and bought tractors. In addition to its educational value the farm actually returned a profit

DEMONSTRATION of the ability of the tractor to successfully cope with local conditions was one of the first steps in the sales campaign of the Universal Motor Co. of Richmond. Although the executives of this organization are city bred men, they had the vision to see that the tractor must demonstrate not only its ability to plow, disk, run the separator and to do countless other jobs around the farm, but the economical manner in which it did these jobs must also be shown. So they became farmers.

Power farming was new to Henrico County, Virginia, back in 1918 when the Universal Motor Co. started to sell Fordsons. The farmers had read about what the tractor was doing on the farms in Nebraska, Indiana and other states, but there had been no demonstrations of what it would do in Virginia. Because power farming was increasing the profits of farmers in other parts of the country, it did not follow that similar results would be obtained in the agricultural sections of Virginia.

IN February, 1919, the firm purchased 231 acres about six miles out of Richmond. This farm was worn out, non-productive, the buildings were dilapidated, and of the total area only 28 acres were ready for immediate cultivation. The balance was covered with second-growth pine and larger timber. From pine thicket, broom-straw and bamboo briars to acres of waving wheat, flourishing corn and potatoes; from the depths of neglect and abandonment to prosperous productivity is the record of what has been accomplished in less than eighteen months. *And power farming is responsible for the transformation.*

P. D. Winston was secured to manage and direct the farming operations. He is a young and progressive farmer who has farmed with tractor power and is thoroughly conversant with the operation of this type of machinery. In addition to him, there are four laborers employed on farm work. The equipment includes two Fordsons and a fairly complete line of implements adapted to these tractors.

At the outset a force of laborers was put to work clearing the land, and by the early part of June, 1919, 100 acres had been cleared. In this work the tractor was used to pull the smaller trees, furnish power for sawing timber, and other work. As fast as the clearing op-

erations progress, the land was plowed and disked, and made ready for the seed.

The 100-acre tract of new land was

The Farmer Scratched His Chin—

WHEN the "city chaps" of the Universal Motor Co., Richmond, told him tractors meant economy.

He had to be convinced.

So the city chaps started a farm right under his nose. Then they invited the farmer and his son to come and be convinced.

They came.

And the city chaps, with power equipment, made the farm make profits.

The farmers were convinced—**THEY BOUGHT TRACTORS.**

You'll want to read this story of the dealer that became a farmer to sell tractors.

Do it NOW!

divided into four fields, and sowed in Brabham peas; soja beans being planted in the 28-acre plot which was ready for

cultivation. In May the management rented additional land on a neighboring farm and put in 23 acres of corn. Due to a prolonged dry spell, this planting was not a success, and the field had to be sowed again. But the tractor's ability to work fast made this a short job. The tractor was used to cultivate the corn until it was 36 inches high. In August 140 acres more were rented and prepared for wheat. The record of accomplishment for 1919 also includes 75 acres of plowing for neighboring farmers.

Last winter tile drains were laid and 10 acres of swampy land were thus made available for cultivation. The buildings have been put in good shape and necessary roads within the farm have been constructed. This summer there were 40 acres of exceptionally fine wheat, 65 acres of corn, 15 acres of Brabham peas, 5 acres of potatoes and 55 acres of recently cleared land is ready for cultivation. Added to this are 115 acres in wheat on a nearby farm.

The farm also has served as an experimental station for the company. New implements and machines have been tested in large numbers to determine whether they will operate successfully in conjunction with the Fordson. This information is valuable to the sales de-

partment, as it tells them just what the capabilities of a device are, and in that way prevents over-selling.

The wonderful crops obtained on the farm are positive proof that the tractor will operate successfully on a Virginia farm, as far as the mechanical side is concerned. It did the work faster and better than it could be done with horses. But this was not enough. The economy of the tractor had to be demonstrated. To do this accurate records of all farming cost were kept, and the figures show that the farm has been operated at a profit. If the cost of clearing the land and improvements to buildings and roads are charged to capital investment—and this is where it properly belongs, as the resale value of the farm has been increased more than enough to compensate for this expenditure—the farm has made money for the Universal Motor Co.

The farm has meant increased sales, and the profits from these have been augmented by money made on the farming operations themselves. It has paid this company to advertise in this unique way.

Meanwhile, the free tractor school—a very important feature of the demonstration farm—has developed apace. The farmer was shown that the tractor would work economically, and he was given an opportunity to learn how to run and care for it himself. What this instruction has meant in satisfied customers and reduced service expense can only be estimated—but there is no doubt that it has been an important factor in the success of this dealer.

The school was started in May, 1919, and a ten-day session laid out. The course covers instruction on how to farm with the tractor, and on how to take care of it, all under the supervision of competent instructors.

The farming instruction included plowing, discing, seeding and other operations that are seasonable. To make the work practical the students are put to work on the farm, and they are largely responsible for the crops that have been grown. Of course, regular laborers were secured for the clearing work. Road making is also taken up and the students helped construct the roads within the farm.

The mechanical instruction is directed by competent service men. A squad of six students constitute a class, and each class tears down and rebuilds a tractor. As the work progresses each part is thoroughly discussed—its function, its relation to other parts, and its care. The students are impressed with importance of proper care by showing them why it is necessary.

The students at the school are either nominated by the county agent or by the local dealer. About twenty men attend each session. Since the beginning there have been representatives from practically every county in Virginia, and also from many in West Virginia and North Carolina. And the students have been of the very best type. Most of them are young farmers, but some are city-bred tenderfeet, and others are mature men, veteran farmers. All are in-

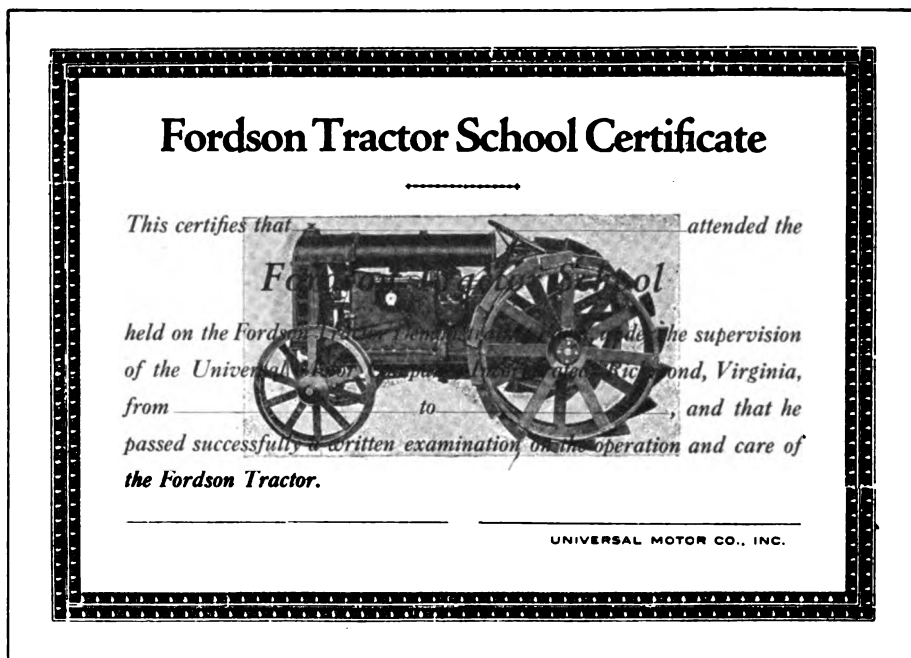
tensely interested in the work and in deadly earnest.

At the completion of the session each student takes a written examination. If he makes a grade of 75 per cent or better, he is furnished with a certificate somewhat similar to the ordinary high school diploma.

tical value in selling the tractor. It enables them to tell from their own experience what the tractor will do. To the service men it affords an opportunity to study the tractor under operating conditions.

The outstanding feature of this enterprise is that almost invaluable publicity

A Certificate With Double Significance



When the farmers finished the course of instruction in tractor operation and care at the Universal Motor Co. demonstration farm they were presented with a certificate such as shown here. It certified not only that they had been "graduated" as competent power farmers, but were also "sold" on the advantages of the tractor

The education obtained at this school has meant much to many of the students. Many of them have secured lucrative positions, as there is a real demand for men who can farm with power. Others have gone home and made their knowledge pay them increased profits on their own farms.

The school is free. The student is put to no expense other than his carfare. While at the farm he is housed in an Army tent and fed at the expense of the company. There is some return from this, however, as the students do a great deal of real work around the farm as they learn. This reduces the labor cost sufficiently to compensate, at least in part, for the expense of lodging and feeding the students.

The farm renders another very valuable service. The Universal Motor Co. uses it as a training school for its sales and service men. The salesmen secure much information here that is of prac-

has been obtained at no expense to the Universal Motor Co. The results obtained on this farm are the finest kind of advertising because they are really educational. Advertising is an important part of salesmanship, and salesmanship is education. The real salesman makes the prospect see how the commodity he has to sell will benefit him. This farm has shown the Virginia farmer that the tractor will operate on a Virginia farm; that it will do good work, and that it will do it more cheaply than it can be done with horses. Further than selling the practicability of the tractor, it has shown the farmer how to use and care for the tractor.

The Virginia farmer knows that power farming is a success, and that he is competent to operate the tractor. The acceptance of these two facts simplifies the sales problem.

It has paid the Universal Motor Co. to put these ideas over.

Gives "During Theater" Service

IF there is some minor repair needed on a customer's car that does not prevent its owner from running it for the time being, the Locust Auto Supply Co., 1411 Locust Street, Philadelphia, will repair it for him, if he wishes, while he is at the theater. This arrangement

is especially advantageous, as the car is safely parked until the play is over and is ready for the customer at that time. This concern also repairs and sells tires, and merchandises other accessories. Many patrons are attracted by this "during-theater" service.

Editorial Observation

Taxes and a Demand for Unity

THE organizations making up the automotive industry have an opportunity before them for joint action which may be the means of preventing adoption of a decidedly injurious tax program. A new national administration is about to come into power and with it a new Congress whose leaders have given indication that they intend to seek Government revenue through taxation of passenger cars as luxuries. If the industry does nothing unitedly the proposed levies are likely to be made, adding materially to sales resistance. If an intelligent effort is made to forestall the suggested congressional action there is more than an even chance of saving the industry millions of dollars in imposts and lost profits as a result of them.

In addition to a prospective increase in Federal taxes it is the intention of many of the State legislatures to enact laws which will impose additional tax burdens on an industry already overloaded.

The automotive industry is the second greatest in the United States. Its potential influence in Congress and in State legislatures is tremendous. It should seek no favors but it should object to being made the football of politics and taxation.

The only way heavily increased taxes can be averted is by concerted action on the part of the industry as a whole. If it makes the right kind of a fight at least a part of these unfair taxes can be avoided.

With less than two months in which to map out a definite program and act, no definite steps have been taken to formulate a platform upon which every organization interested in automotive vehicles can stand.

Unless every organization which is a part of the

industry gets together and acts together, they will wake up some fine morning to find that a few more taxes have been piled on their shoulders.

Legislation, state and national, never was more important to the industry than this year. The Motor Vehicle Conference Committee, through State committees, is watching State legislatures. The National Automobile Chamber of Commerce is on watch at Washington but it is not exerting all its great influence to act in harmony with other organizations.

The directors of the Motor and Accessory Manufacturers Association at a meeting here Friday decided to table the tax question because of the pressure of more important business. Their next meeting will be held late in March. Hearings on taxes will begin a fortnight after that date.

The industry is doing nothing positive and determined to prevent the flooding of the country with American made automotive equipment and supplies bought for a song in foreign countries.

The industry is doing nothing positive and determined to prevent the War Department from dumping scores of thousands of automotive vehicles of all kinds on the market.

If every member of every automotive organization were to send a telegram of protest to the legislators who represent him they would at least know he would hold them accountable for classing motor transportation as a luxury and taxing it accordingly.

Isn't it time for the automotive industry to prove it can work in harmony to prevent unfair, unjust and discriminatory legislative action?

If half the things planned are done to it, the recovery of the industry will be retarded for many months.

Why Associations?—Read This

A GOOD sample of aggressive, timely association effort is the full page warning printed recently over its name in the Richmond Item by the Wayne County Automotive Trade Association. The warning points to the fact that every automobile owner should be interested in the report that Treasurer Houston at Washington has informed Congress that there must be raised \$290,000,000 from automobile owners each year for the next four years as their share of the total of two billions of dollars to be

raised over and above all present and past government incomes. It pointed out that at this rate the cost to each automobile owner will be \$62. The warning contained a coupon to be addressed to Congressmen and Senators protesting against any legislation that will put any special tax on automobile owners. Under the name of the Wayne County Automotive Trade Association was listed the names of its members and the cars they sell. It made a strong popular appeal and aroused much interest.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD'S legal editor to discuss the question?

Lease for Driverless Car

Editor Motor World: We beg to enclose a copy of the form which we are now using in the rental of cars on the driverless plan. We will be glad if you will go over same. Any suggestion on your part will be appreciated.—D. C., Inc., New Orleans, La.

Answer.—Your form appears to be a good one, carefully and ably drawn up. I do not know of anything that I could suggest should be added. You attempt to provide that the lessor make good for damage to the car, that he be responsible for damage to the person or property of others, and that he shall not carry liquor. Of course, a contract is no good if a man is not financially responsible. I see no reason why this scheme should not work out under a contract of this kind in states like New York where no lien is given on a car for injuries and an owner is not responsible except where the car is being used in his business at the time an accident occurs. Of course, in states where an injured party has a lien on a car for injuries inflicted by it and in states where mere ownership is held to make a man responsible, I would rather be in some other line of business.

Lien Law Only Applies in State Passed

Editor Motor World: In reading over the January 12th, 1921, issue I see under heading "The Law" you have published a garageman's lien law of New Jersey in full but it only seems to apply to cars in the State of New Jersey.

I have a man who had us work on a Dodge car. The parts and labor amounted to a fair sum. Now this party has, as far as I know at the time, good credit, but he has taken the car to Long Island and refused to pay any part of the bill. Car is in perfect shape so there is no come back on work.

He also has a Chevrolet car which I brought in shop for repairs just before the little trouble on Dodge bill. I hold a small bill on the Chevrolet also and am holding same until bill is paid. Owner said I should sell the car and then I would get my cash for both jobs but another garage has a lien on this car I am holding. The bills on Chevrolet are worth about as much as the car itself.

Now do I lose the parts and labor on Dodge or can I in any way, force him to return the car to State of New Jersey? Can I hold Chevrolet for my repair bill

Car No.

Lease No.

LEASE COVERING THE RENTAL OF FORD CAR FROM DRIVERLESS CARS, INC.

1. DRIVERLESS CARS, INC., of the city of New Orleans, hereinafter referred to as Lessor, hereby lease to the undersigned, hereinafter referred to as Lessee, who, being of lawful age (over 21 years), one Five Passenger Ford Car, Engine No., License No., with appurtenances and property listed below, which, together with the above mentioned Car, the Lessee has inspected and accepts all as being in good condition.

2. THE LESSEE HAVING filled out and signed a form card, makes same part of this contract.

3. FOR THE LEASE OF FORD CAR the Lessee agrees to pay the Lessor at the rate mentioned hereunder, until the said Lessee has actually returned and delivered said Car and appurtenances to the Garage of the Lessor, situated at 801 Baronne Street, in the city of New Orleans.

4. THE LESSEE AGREES to return the Ford Car in the same condition as at the time of its delivery to the said Lessee, or failing this, agrees to pay the Lessor a sum sufficient to cover the actual repairs and replacements, the cost of such repairs and replacements to be determined by an authorized Ford Dealer's repair and parts prices. Furthermore, for such length of time as Ford Car is undergoing repairs, the Lessee agrees to reimburse the Lessor at the rate of Ten Dollars per day.

5. THE LESSOR RESERVES THE RIGHT to retake the Car and appurtenances at any time, charging the Lessee for the actual time the Car has been in the Lessee's possession.

6. THE LESSEE AGREES to assume all liability for any damage or injury to person, persons or property caused by Car during its period of lease by the Lessee.

7. THE LESSEE REPRESENTS self to be a competent Auto Driver and is familiar with existing traffic laws, and further agrees to answer for any traffic violation by this Car during its period of lease by the Lessee.

8. IT IS EXPRESSLY understood that the Lessee is not to use the car in violation of any existing liquor laws.

9. THE LESSEE AGREES to pay at once, and not later than five days, the value of any property or appurtenances that may be stolen or otherwise removed from the Car or for the Car itself, should same be stolen during the period of lease by the Lessee.

10. THE CAR IS NOT to be used in the carrying of more than five passengers and should this be violated the rate mentioned hereunder will be doubled at the Lessor's option.

11. THE CAR IS NOT to be taken or used out of the Parish of Orleans, except by special consent of the Lessor.

12. SHOULD HUBODOMETER be removed, Carbureter or other seals on the car be broken or otherwise tampered with, or the top lowered, the Lessee agrees to pay Ten Dollars for any violation.

13. THE LESSEE AGREES to return the car not later than and failing to do so, the Car is to be considered as if stolen and the police are to be notified relative to its loss.

A. GASOLINE TO BE SUPPLIED BY THE LESSEE.

B. APPURTENANCES AND PROPERTY LIST AS FOLLOWS:

Bumpers, Hubodometer, Jack, Pump, Set of Curtains, Patches, small tools, and extra
RATE. DEPOSIT.

This contract made, dated and signed in the city of New Orleans, on 1921.

TIME OUT.

TIME IN.

....., Lessee.

Miles in.	Hours at.
Miles out.	Extra mileage.
Miles used.	Gas Dr.
Miles all.	Gas Cr.
Miles extra.	Total recd.
Gas Out.	Dr.
Gas in.	Cr.
Total Gas.	

when a lien is held by another garage previous to my work? Can I collect the Dodge bill by suing in civil court as he has considerable property in his name? —H. K., Saddle River, New Jersey.

Answer.—The law of any state only applies to that state. Of course you

always have a right to start a civil suit for any sum due you. Go to your local attorney and see if you can sell the car for both debts, under his instructions. The other garageman will have to be taken care of before you sell, as I understand the law.

A Department of BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 181

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Service Operations on the Essex Lubricating System

Adjustment of Plunger Pump Stroke to Increase or Decrease Flow of Oil—Setting the Oil Gage

THE lubricating system of the Essex car is of the circulating, constant level type, operating through splash. The oil pump is mounted at the front end of the engine, above the frame line and in case it is necessary to clean, inspect or remove it, this can be done without the use of any special tools. Fig. 1 shows the location with relation to other parts of the engine. The operation of the system is as follows:

1—The pump takes oil from the pressed steel reservoir at the bottom of the engine, drawing it through a metal screen of fine mesh.

2—This oil is fed directly into the front compartment which contains the timing gears and their bearings.

3—From here it flows into the first trough which is immediately under cylinder No. 1.

4—The dipper on the lower side of the connecting-rod cap practically empties this oil trough at every revolution, throwing the oil into channels or gutters on the side of the reservoir and crankcase. The upper gutters lead to the main bearings and thus there should be a continuous stream of oil to these.

5—The lower gutter feeds the oil directly into the trough under cylinder No. 2.

6—The splash from No. 2 feeds No. 3 and No. 3 feeds No. 4.

7—From this point the oil goes back to the lower reservoir through an opening. All the oil which enters at the front end must circulate completely through the various troughs and bearings of the engine before it can make an exit at the rear end of the trough where it re-enters the reservoir.

In order to indicate to the driver the amount of oil in the reservoir, there is a float indicator mounted on the left side of the engine. This shows the level of

the oil by means of a button working in a glass tube, this also acting as a filler tube.

The reservoir contains 5 qt. of oil which includes not only the reservoir

but the troughs themselves.

The pump is of the plunger type and is operated by a cam which is driven by a worm gear mounted on the distributor shaft. The driving mechanism is also

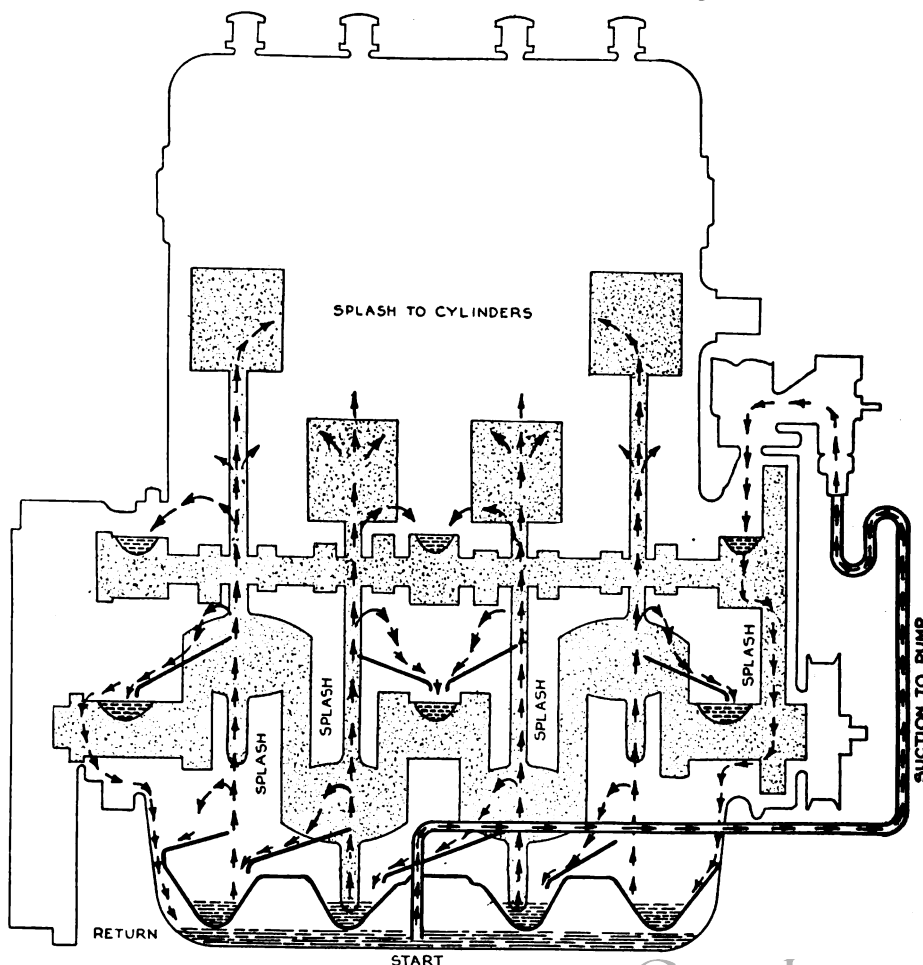


Fig. 1—Diagram showing path taken by oil circulating in Essex engine

connected to the carbureter throttle. This regulates the stroke of the oil pump in proportion to the speed of the engine. As the connecting rod dippers splash more oil at high speeds than low, it is necessary to have more oil in the troughs and this can only be done by increasing the flow of oil at high speeds. The connection to the throttle rod makes this action automatic by holding the plunger away from the cam at low speeds so that the cam only operates the plunger for a portion of the stroke. As the speed increases, the plunger is allowed to come closer to the cam, and the stroke of the plunger is therefore increased, which results in more oil flowing through the system and keeping the troughs more fully supplied.

How to Adjust the Stroke of the Pump

There is a plug directly over the pump plunger and by removing this, the plunger can be seen.

1—Insert a match stick or piece of wire in the hole. This will butt up against the top of the plunger and by turning the engine over and holding the stick against the top of the plunger, the amount of travel of the plunger can be measured.

2—For ordinary normal driving, this travel should be about 1-32 in. Where excessive or extreme driving conditions prevail, the travel can be increased to 1-16 in. Of course this measurement will be the travel at low speeds as the throttle rod will automatically increase the travel at high speeds, and it is also necessary to have the throttle fully closed when making the measurement.

3—To change the setting of the plunger, loosen the clamp lever which is directly behind the pump housing assembly.

4—Turn the outer end of the oil control shaft to the right or left until the proper stroke registers on the wire or match stick.

The Oil Gage

The oil gage which is mounted on the dash is connected directly to the top of the oil pump. The gage simply acts as an oil indicator to show that the oiling system is operating properly. It is not a true indicator of the pounds pressure or the amount of oil delivered but merely shows that the pump is operating and delivering oil to the various parts of the engine.

In case the oil plunger adjustment is changed so as to cut down the plunger travel and this reduces the movement of the oil gage so that it cannot be readily seen, slightly increase the tension of the plunger spring directly over the check valve.

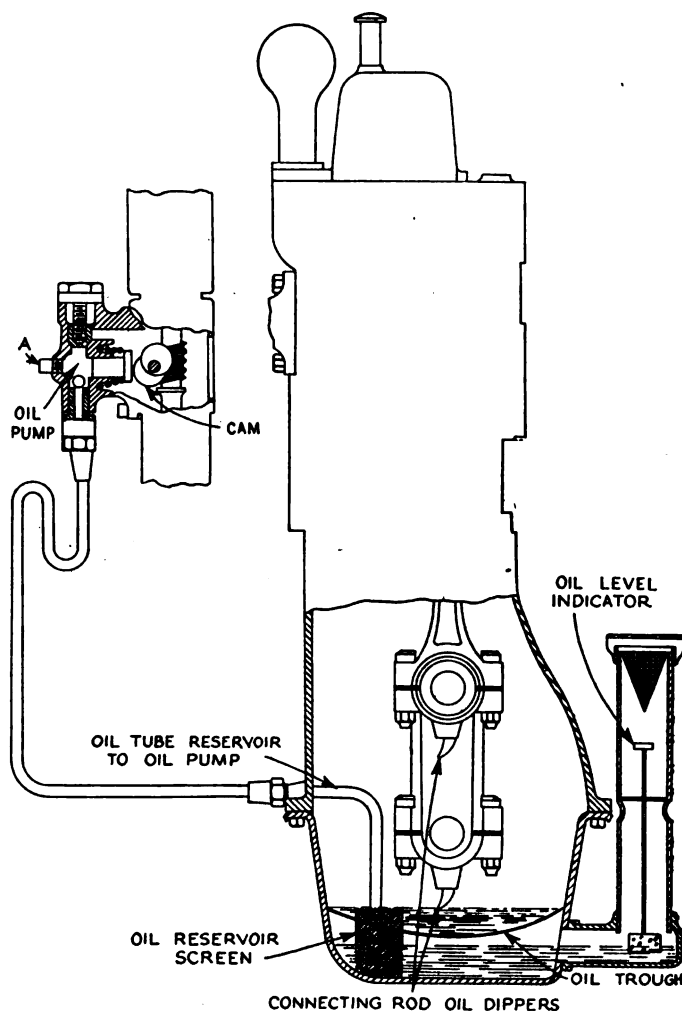
In case the gage is showing too much pressure, decrease the spring tension. A reading of from 2 to 3 lb. under fairly high speeds and about 1 lb. pressure at low speeds is sufficient.

Changing the Oil in the Engine

The oil in the engine should be changed about every 500 miles. After 2000 miles the oil should be changed and the engine given a good flushing. To do this—

1—Remove the drain plug from the

Fig. 2 — Components of the Essex oiling system. The oil pump is mounted up above the frame line at the front of the engine and the oil is taken from the reservoir and pumped to the front connecting-rod trough where it is splashed from there on back and to the cylinders. The plunger has a variable stroke



reservoir and drain off all the oil. Replace the plug.

2—Remove the valve plate cover and pour in about 2 qt. of kerosene. This goes into the tappet compartment and drains down through and onto the troughs. This economizes in the amount of kerosene because if it is poured through the oil filler, 5 qt. will have to be put in to get the kerosene into the troughs through the pump.

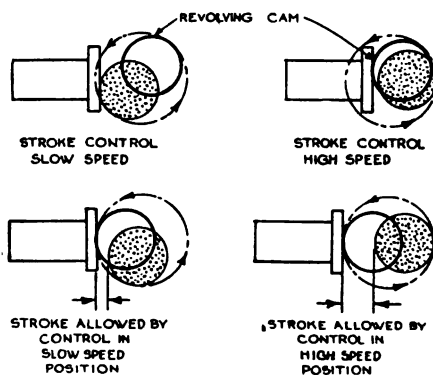


Fig. 3—Variation in oil pump stroke at different speeds

3—Crank the engine with the starter for about 30 sec. Do not let the engine run under its own power as this would be liable to cut the bearings. This will work the sediment out from the inside walls.

4—Take the oil pan down and clean it thoroughly with a stiff paint brush and kerosene. Flush out the oil screen and drain, making sure that no kerosene remains in the pan. Replace the pan and replace the bolts, setting them up uniformly so as not to spring the oil pan and cause oil leaks. Replace the drain plug.

5—Pour 2 qt. of new oil into the engine through the tappet compartment and replace the valve cover.

6—Refill the reservoir, putting in 3 qt. of new oil through the oil filler. This makes 5 qt. in all. Placing the 2 qt. of oil directly in the tappet compartment insures oil getting directly to the bearings without having to be pumped through the pump which may take a minute or two, thus giving the bearings a chance to cut.

Trade Associations, Their Organization and Management, by Emmett Hay Naylor, president of the American Trade Association Executives; published by the Ronald Press Co., New York. Price \$5.

This is an interesting volume on the subject of organization and management of trade associations. It analyzes in detail the purpose, structure, procedure and value of trade association and contains a complete and accurate list of trade associations and their addresses.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Ramp Location Features This Building

Sufficient Length for a Straight Ramp Is Secured by Placing It in the Center, Parallel to the Street

IN buildings of more than two stories, consideration must be given to how a car is to get from the top of one ramp to the bottom of the one leading to the next floor. If the ramps are placed one over the other, then there is frequently considerable space devoted to aisles which are needed to connect the ramps. In order to get around this difficulty in this building, the ramp has been made straight and continuous. This reduces the storage space slightly, but on the other hand, no special connecting aisles are required.

The location of the ramp in the center of the building parallel to the street, divides it into two bays, each of which is fifty feet wide. This is the correct width for two rows of cars facing a center aisle. The turns off the ramp are rather sharp, but by cutting off the curbing in the center of the ramp at some distance from the floor level, a car coming up can swing over onto the down ramp in order to secure sufficient turn-

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

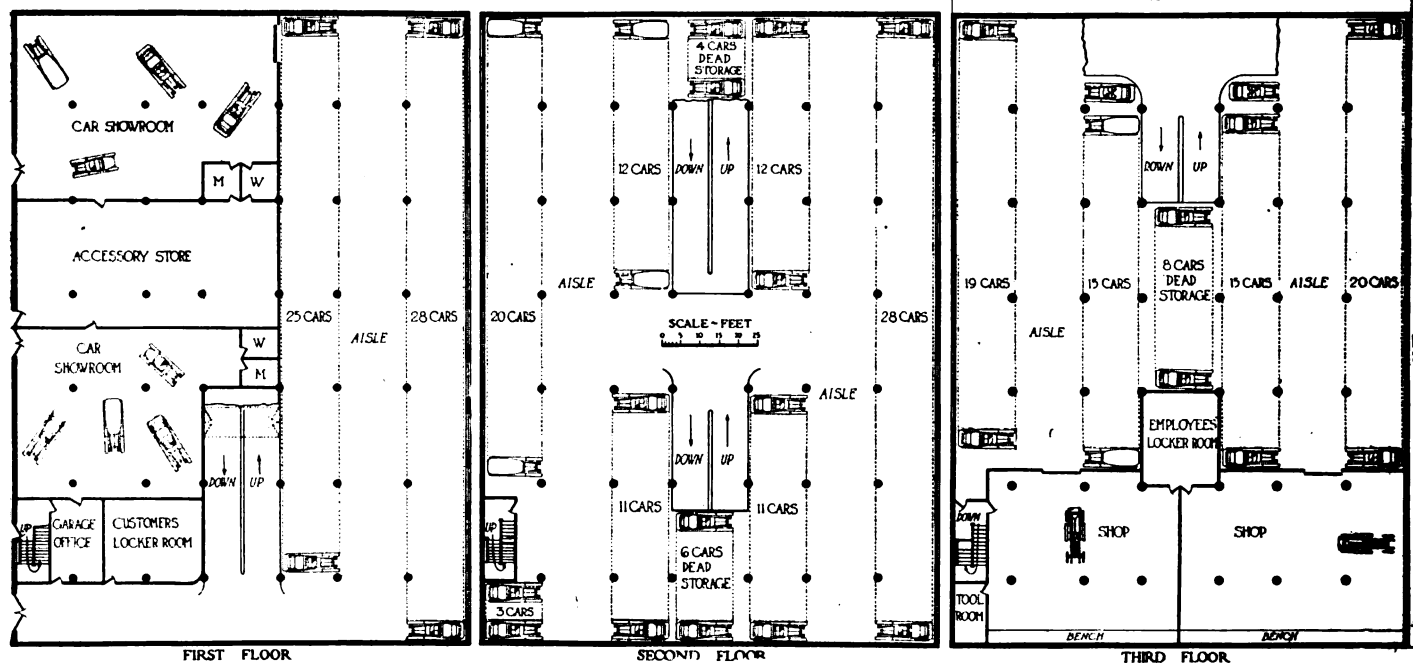
ing radius to get into the rear bay of the building without backing. The height of the ceiling has, of course, an effect on the length of the ramp, but it has a more important influence on the cost of the building. Eleven feet is sufficient height for a garage that is to be used for the storage of passenger

cars exclusively, and anything over this tends to run up the first cost of the building without improving it materially.

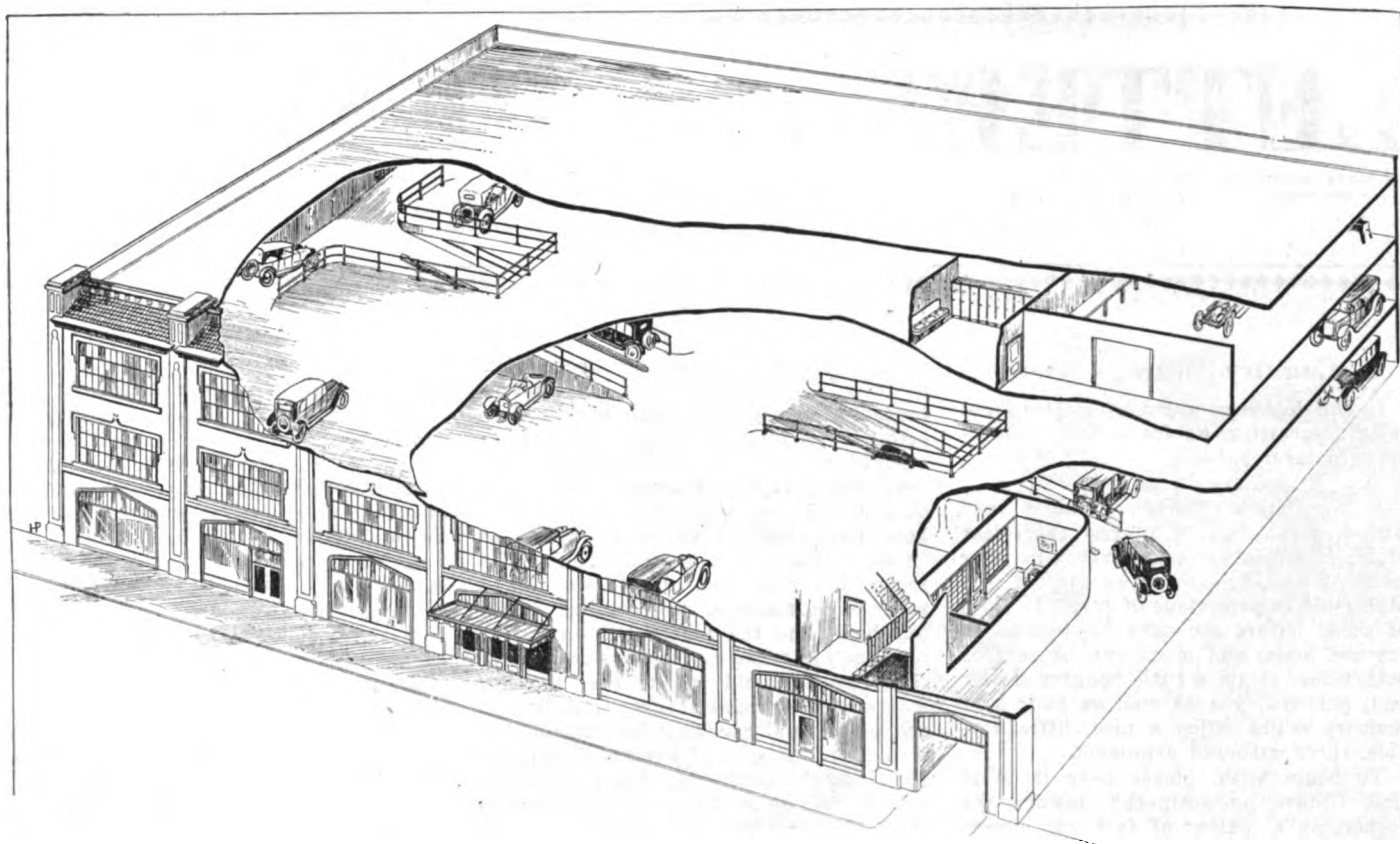
The columns have been placed so that their interference with car storage is a minimum. There is just enough room for the storage of three cars between them. The indicated storage capacity is about 216 cars, all of which have aisle frontage, and 18 cars which do not front on aisles.

Two car salesroom and an accessory store are provided on the first floor. In order to furnish service facilities for each dealer, there are also two shops on the third floor. The garage office is located on the entrance driveway, where all cars entering and leaving must pass by it. Next to it is a locker room for the use of customers.

A building of this size and type is well adapted to the d'Humy ramp system, and although we have not worked out the details, it would appear that the same storage capacity could be obtained



This three-story garage has large storage capacity and also provides sales and service facilities for two dealers



The installation of the ramp is very clearly illustrated in this cutaway view of the building

in a building 168 x 100 ft. This is because of the fact that the ramps, in the d'Humy system, would merely occupy the space of the connecting aisles and consequently that taken up by the ramps in

the building we have designed, could be eliminated.

Skylights should be used to illuminate the third floor, but on the other floors artificial light will have to be used

for the interior parts at last. With low ceilings it is naturally advisable to locate the lighting fixture very near the ceiling, and it is necessary to provide the lamps with wide angle reflectors.

Book Reviews

Automotive Ignition Systems, by Earl E. Consoliver and Grover I. Mitchell. McGraw-Hill Book Co., Inc., 370 Seventh Avenue, New York City.

In this book is provided a systematic course of study of ignition systems used on automobiles, trucks, tractors and airplanes. It is written especially for the man, either in the factory or the service station, who has to install, repair and adjust ignition systems. The fundamentals of electricity are first explained, and then the various types of ignition systems and their application are discussed. Maintenance also comes in for a thorough discussion.

Storage Batteries, by C. J. Hawker. Price \$2. The William Hood Dunwoody Industrial Institute, Minneapolis, Minn.

This book is written for the battery service man, and seeks to furnish him, in thorough going but simple form, the technical and practical information about storage batteries which will enable him to meet the demands of his trade. Both the

lead and Edison type of cells are considered. It starts out with a brief history of batteries, and following this come discussions of chemical and electrical actions, manufacturing methods, operation and maintenance.

Automobile Electrical Systems, by D. P. Moreton and Darwin S. Hatch. U. P. C. Book Co., Inc., New York City. Price \$3.50.

This volume has been prepared to meet the demands of the car owners and repairmen who wish to know the installation, operation and repair of all the various ignition and starting and lighting systems. The authors have assumed that the readers have a working knowledge of the fundamentals and principles of the electrical circuit, and the entire book is devoted to the discussion of the various systems. Numerous special wiring diagrams are given throughout the book, which have been specially prepared so as to illustrate the actual installation of the electrical equipment in a clear and simple manner. A number of special electrical specifications have been prepared to assist the readers in readily determining the nature of electric systems used on any car together with the details of that system. These tables

will enable the owner or repairman to pick out the correct lamps, fuses, etc., for each system, thus eliminating all guess work or improper substitution.

Plans have been forwarded to the following dealers direct:

Jones Bros., Norwich, N. Y.
 Penso's Carriage & Auto Supplies,
 Kingston, Jamaica
 Leo J. Kelly, Dewitt, Iowa
 Southern Motors Co., Jacksonville,
 Fla.
 E. C. Schnoor, Laurel, Iowa
 Don Lee Motor Cars, Fresno, Cal.
 Huron Motor Sales Co., Bad Axe,
 Mich.
 Charles G. Plummer, Los Angeles,
 Cal.
 Higbee Buggy Co., Sheridan, Ind.
 Sann Auto Co., Boswell, Pa.
 P. A. Warner, Hornell, N. Y.
 Jess Bango, Wheeling, W. Va.
 H. H. Ball, Princeton, W. Va.
 Motor Supply Co., Pittsburgh
 H. M. Andress, Elyrea, Ohio
 O. L. Hunting Co., Springfield,
 Mass.
 Williams Garage, Salisbury, Md.

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

A Country Dealer's Views

In this letter an accessory dealer gives some interesting advice on the jobber-manufacturer subject.

Editor Motor World: I have read with a great deal of interest the letter of Mr. Manufacturer appearing in your issue of Jan. 5, as well as that of Mr. McDonald in your issue of Jan. 12. Both of these letters are very interesting to say the least, and much can be said of both sides. I am a little country dealer and, perhaps, you as well as your subscribers might enjoy a nice, little, lovable, three cornered argument.

To begin with, please bear in mind that I have no antipathy toward the jobber, as a matter of fact, my closest friend and the man to whom I owe most in gratitude is one of the largest jobbers in the metropolitan district, so please be assured that I am starting out with an open mind.

Does Jobber Reduce Delivery Time?

Mr. McDonald's first argument is that "The jobber's greatest service to the manufacturer is in reducing the time of delivery of merchandise to the dealer and reducing the manufacturer's carrying charges both for merchandise and storage and accounts receivable." This is, indeed, fallacious in several respects. There was a time, in the memory of man, when the jobber did perform his function of shortening the time of delivery, but for the past several years this has not been the fact; my experience has been that no matter what the merchandise, no matter what the volume, back order has been its middle name. A great many times there may have been legitimate excuses, or reasons, but as a general rule it was simply because the jobber has not been carrying out his function of shortening the time of delivery. One might say that he could not get the merchandise, but if he really desired to fulfill his obligations to dealer and manufacturer alike, his orders would have been sufficient to have overcome the back order evil. At the present time, with the consumers and dealers purchasing as little as they do, with stocks of merchandise throughout the entire country being sacrificed to obtain ready cash, our jobber friends have not yet been able to overcome the back order habit.

As to the question of carrying charges, both for merchandise in storage and ac-

counts receivable—the first proposition is fully answered by the immediately preceding paragraph—with back orders being the custom and habit rather than otherwise, there have certainly been very few carrying charges. As to the question of carrying accounts, the jobbers have had to carry no more, in volume, than the manufacturer. The jobber has only been able to sell to the retailer as much as the retailer would purchase, and the jobber has only been purchasing from the manufacturer as much as he could sell to the retailer. Therefore the manufacturer in selling to the jobber and carrying his account for a thousand articles of a certain kind, and the jobber selling that same thousand articles to the retailer, my deduction is that the account carried by each is exactly the same, with the simple exception that the account by the jobber is swelled to the extent of his profit.

As to the jobber creating demand, selling goods, and incurring expenses far beyond the warehouse, I take issue with Mr. McDonald, with the one exception of the item of incurring expense. The cars that the so-called salesmen of these jobbers travel in are indeed somewhat more expensive than heretofore, but when the jobber figures that with this expensive mode of locomotion his representative probably covers three times the territory in a given time, it is not so expensive after all. And in my years of experience as a retail merchandiser of automotive equipment, I have yet to see the jobber or his salesman spending ten cents of his own money attempting either to create demand or to sell merchandise. It seems to me that jobbers writing out orders, mailing them to the factory and having the factory shipment made to the retailer, has sufficient compensation, no matter how low or small the jobber's discount is. I think I could build up a wonderful business and quite a considerable profit on the 5 per cent margin by having factory shipments made.

Might Create Monopoly

As to the manufacturers only selling to real distributors and developing 75 to 100 of these merchandisers, I have this to say: The jobber with the largest capital behind him at the present time would be in a position to obtain for himself a complete monopoly with little or no competition in the way of quality merchandise, price or competitive service. With this monopoly entirely under their control, would it not follow that the distributor more than ever would

lay down on the job and simply take orders rather than attempt to sell?

As to the credit phase of selling the dealer, I have already explained in a preceding paragraph that the jobbers carry the dealer for no greater amounts of money than the manufacturer carries the jobber.

As to the proposition that there is no inclination to withhold buying except in so far as it is necessary because of unbalanced inventories, I have found this to have been the rule rather than the exception, and if all jobbers alike are suffering from unbalanced inventories it is time for someone else to get into the jobbing business. I am unable to understand the present inability of jobbers to obtain the more commonly used merchandise that is bought and sold every day in the week, except that there is really no inclination to purchase at the present time.

Discounts to Dealers

I notice that the steps of the sale as outlined are manufacturer to the distributor, distributor to jobber, jobber to dealer, dealer to consumer, and it is suggested that each party to the transaction should be paid for what he does and in proportion to what he does. You can probably guess, from what I have said above, how much the jobber should be paid for what he does, but I do advise some of the manufacturers to change their discounts to the dealer. They seem to have a wonderful habit of giving the dealer anywhere from 25 to 40 and 10 per cent discount to induce the dealer to put on his shelves and endeavor to push a new article. Just as soon as the dealer has put the thing on the market for the manufacturer, and it gets to be a well recognized article, Mr. Manufacturer cuts the dealer's discount from whatever it was before to the convenient and wornout 25 per cent.

In the final analysis I maintain that the demand is created by two distinct forces, (1) the retail dealer and (2) the manufacturer, and the sooner the manufacturer realizes how much depends on the good will of the local dealer the sooner will he divorce himself from the methods of the jobber.—John Resenbaum.

Special Interest in Shortcuts

Editor Motor World: Have been reading Motor World for several years, and have taken special interest in your Repairshop Shortcuts.—F. X. Eggenpiller, Jr., Louisville, Ky.

Repairshop Shortcuts

No. 2852—A Piston Ring Squeezer.—An old piston ring, if not too much worn, has sufficient power to squeeze another ring nearly shut when placed over it as shown in the sketch. The openings should come opposite each other.—E. J. Balmos, Proprietor, Balmos General Repair Shop, Devine, Texas.

No. 2853—Tool for Disassembling Spark Plugs.—A Ford timer cover is cut out in the center to a hexagonal shape to take the large hexagon of the spark plug. Attaching the cover to the wall or bench, the packing nut can be unscrewed with another wrench.—Walter Pfister, Grover Hill, Ohio.

No. 2854—Ford Rear Axle Bearing Sleeve Puller.—Most of the parts can be made from scrap around the shop. The grease cup is removed before pulling the sleeve and a hose clamp is used to compress the new sleeve before inserting.—Herbert A. Fiske, Proprietor, H. A. Fiske Garage, New Bedford, Mass.

No. 2855—Ford Universal Ball Cap Used for Funnel.—The Ford universal ball cap, part No. 3369, is used as a funnel for gasoline, oil or water. If desired, a spout can be soldered to the lower part. E. J. Balmos, Proprietor, Balmos General Repair Shop, Devine, Texas.

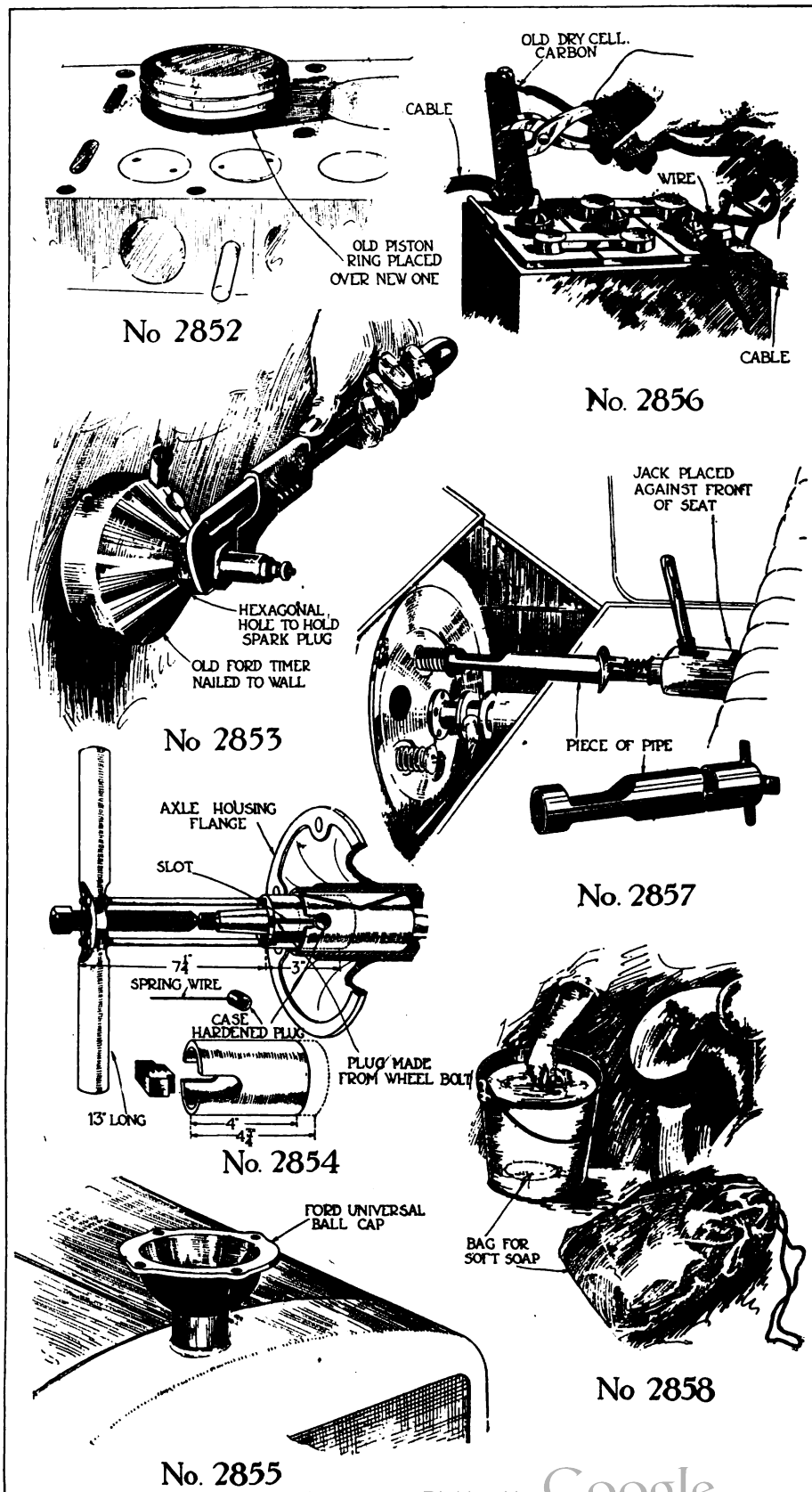
No. 2856—Removing a Stubborn Battery Connector.—A carbon from an old dry cell is wired up to the opposite pole of the battery. Placing a corner of the carbon against the stuck terminal will cause it to heat up and it can then be pulled.—Scott S. Bond, Hankinson-Nash Motor Co., Hattiesburg, Miss.

No. 2857—Clutch Spring Holder.—A spring holder is made from a piece of iron pipe, one end being filed to allow four lugs which attach to the top of a jack. The other end is filed or ground out as shown so as to allow the pin to be withdrawn from the clutch when the jack is raised.—Beechview Garage, Beechview, Pittsburgh, Pa.

No. 2858—Cloth Bag for Soap.—Instead of throwing the soap directly into a pail of water, it is placed in a cloth bag. This saves almost 50 per cent of the soap which is ordinarily wasted by being thrown out with the dirty water.—W. M. Jarvis, Jarvis Palace Garage, Burlington, Vt.

MAKE A DOLLAR

SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



New G. M. C. Trucks Have Removable Sleeve Cylinders and Two-Speed Range Gearsets

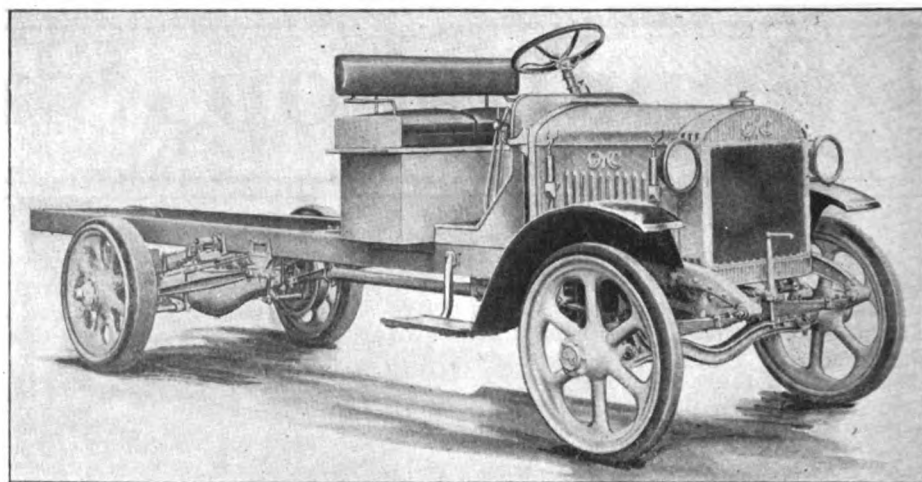
Rapid Service Provided for in Design of All Parts

THE General Motors Truck Co. is just entering production on a new line of trucks which is somewhat similar to the previous line, but there are a number of radical changes, including an engine made by the company.

There are five models altogether, the capacities being $\frac{3}{4}$, 1, 2, $3\frac{1}{2}$ and 5 ton. Altogether there are three engines which are of a similar design but different in size. The same engine is used in the $\frac{3}{4}$ and 1 ton, and another engine is used in the $3\frac{1}{2}$ and 5 ton. The 2-ton size uses an intermediate engine.

The new line of trucks has been designed with an idea of furnishing uninterrupted transportation to the purchaser of the truck, and there are several new points which are especially interesting to the man who is interested in economical maintenance.

The new models in general are faster and more powerful than the old line. Previously the idea was to supply sufficient power for all circumstances. In the new models a speed factor has been incorporated with the idea that the present road and transportation conditions make the factor of speed as important as that of power.



The 2-Ton G. M. C. Truck Chassis, Model K-41

The New Engine

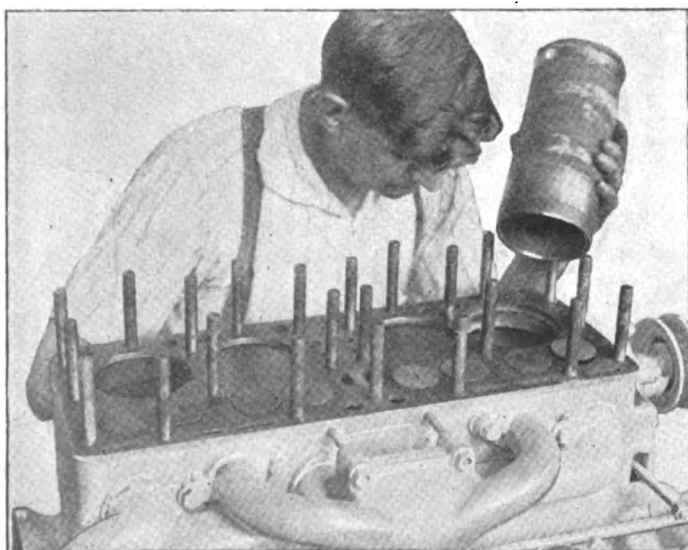
The most radical thing about the new engine is the use of a removable cylinder sleeve. This sleeve is a gray iron casting machined inside and outside to very close limits. These removable sleeves can be taken out by means of a special puller and can be replaced in the same way. Aside from the easier service rendered in case of scored cylinders, there is a greatly increased volume of water in the cooling system. There are asbestos and cork gaskets which are compressed when the sleeves are inserted, the lower end of the sleeve being slightly tapered. After the sleeve is inserted it is held in place rigidly by the cylinder head, which is bolted down with twenty-four $\frac{5}{8}$ -in. studs.

The engine is suspended on a 3-point principle, ball and socket mounting being employed in the two rear supports. This mounting is in conjunction with a semi-flexible frame construction. The ball and socket joint is held together by a bolt that passes through the joint and extends below the engine hanger far enough to enable the mounting of a heavy coiled spring. The front support

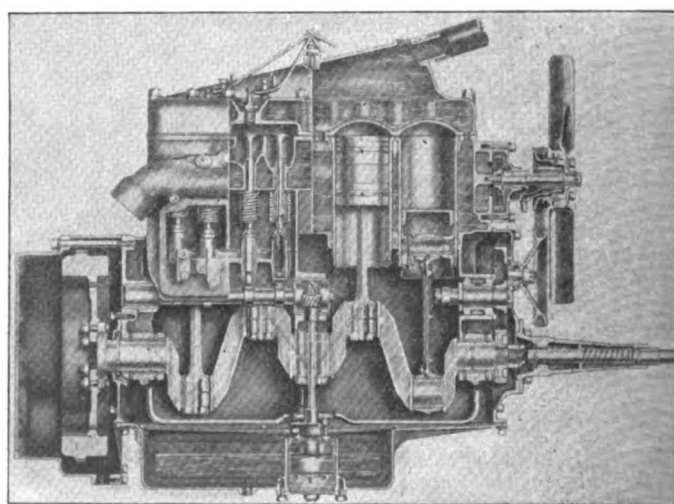
of the engine, which forms the third point, is a collar on the starting crank housing which is bolted to the timing gear.

The connecting-rod bearings are cast integral with the rods by tinning the rods first and pouring the babbitt afterwards. In replacing connecting rod bearings instead of replacing the bearing alone, an entire new rod is inserted and the old rod sent back to the factory or branch for rebabbiting.

The oil pump is hung in the crankcase on a bracket to which it is fastened. It is of the gear type, driven by a splined vertical shaft, which is driven from the camshaft. The oil pan, which is an aluminum casting, incorporates sediment chambers through which the oil must pass before it returns to the pump. The first settling chamber is under and surrounding the pump, although it is separate from the inside. The major portion of the dirt or sediment contained in the oil is deposited in this chamber before the oil passes to the last settling chamber, and it is possible to readily drain this by the removal of a plug beneath the pump. The first settling chamber has a capacity of 1 pt., so this



Removing the detachable cylinder sleeve



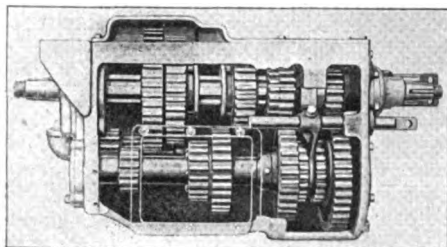
Sectional view of the new G. M. C. engine. The cylinder head presses down against the sleeves, holding them in place

is all the oil that is lost in cleaning this oil pan.

The cooling water is circulated both by thermo-siphon and pump. The water in the cylinder head and around the valve is circulated by the pump. The water contained in the jacket around the cylinder sleeve is not affected by the pump, but circulates by thermo-siphon. By this design the water around the jacket does not circulate until it is heated sufficiently to set up a thermo-siphon action.

The radiators are vertical fin and tube type, the tubes being assembled in connection with the cooling fins in a single unit or core. This construction is used in the two lighter models, but on the larger type, that is the 3½ and 5 ton sizes, the radiators are of the vertical continuous fin and tube, built up type.

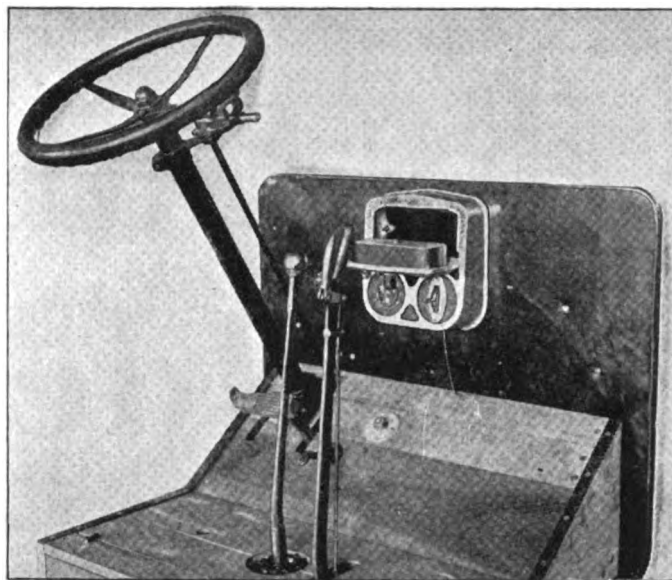
A combination manifold and carbureter is used to take care of the present low grade fuels. Both the vertical section of the intake manifold and the venturi chambers of the carbureter are superheated by hot gases direct from the exhaust manifold. Dampers are provided to take care of the regulation of heat for different climatic conditions.



The two-range gearset. The additional range is secured by the two sets of constant mesh gears, giving a variable speed countershaft

One of the features of the electrical system is the fact that the wiring assembly is a complete unit in itself, and is made up to give exceptional simplicity. All the instruments, except those on the smallest models which have formerly been mounted on the dash, are now assembled in a single unit in the form of an aluminum housing. A panel on this housing can be lowered to provide access to the switch connections and terminals. Electric lights are furnished on all the

The instrument box incorporates in one unit the terminals and switches



models with the exception the smallest.

The gearset is of exceptional interest because it provides two speed ranges which are brought about by two sets of constant mesh gears, either one of which can be thrown into engagement. Each speed range has four separate gear ratios, so that the operator has a choice of eight forward and two reverse speeds. The addition of only four parts to the gearset provide this double range. It is possible to provide a higher gear ratio rear axle, and by using the double

range to also provide a lower gear ratio than before. This double range is operated by a separate lever.

All of the gear sets, with the exception of the smallest models, are so designed as to enable the installation and use of both power take-off and tire power pump at the same time. The smallest model is provided with a mounting for the tire pump only.

The rear axles and the steering gears are practically not changed from previous designs.

Specifications of G. M. C. Series K. Trucks

	K-15	K-16	K-41	K-71	K-101
Capacity	¾	1	2	3½	5
Wheelbase	132	132	146	163	163
			158	187	187
Tires, kind	Pnu.	Pnu.	Sol.	Sol.	Sol.
Tires, size, front	32 x 4½	34 x 5	36 x 4	36 x 5	36 x 6
Tires, size, rear	32 x 4½	34 x 5	36 x 7	40 x 5 Du	40 x 6 Du
Engine, 4-cylinder ..	3½ x 5½	3½ x 5½	4 x 5½	4½ x 6	4½ x 6
Ignition	Eisemann	Eisemann	Eisemann	Eisemann	Eisemann
Speed, m.p.h.		25	18	17	15
Carbureter	Marvel	Marvel	Marvel	Marvel	Marvel
Clutch	Dry Disk	Dry Disk	Dry Disk	Dry Disk	Dry Disk
Gearset	Selective	Selective	Selective	Selective	Selective
Final drive	Bevel	Bevel	Worm	Worm	Worm
Rear axle	Own	Own	Timken	Timken	Timken

Revere Motors Seeks Funds

LOGANSPOUT, IND., Feb. 24—Stockholders of the Revere Motors Corp. have elected a new board of directors to devise ways and means to place the company on a solvent basis by the floating of a bond issue. The company now is in the hands of a receiver in a friendly suit brought by U. S. Hoffman and Charles Hanna, stockholders. The new directors elected are C. C. Bishop, Charles Young, A. L. Jones, M. L. Fansler, A. A. Seagraves, Edward W. Kelly and E. F. Metzger. They propose to issue first mortgage bonds to the amount of \$250,-

000. The indebtedness of the company at present is given as \$217,000, and several suits are pending against it for breach of contract. It is believed that if a bond issue can be floated, the company can be re-established on a firm basis.

Many service stations in Atlanta have enforced wage reductions ranging from 10 to 20 per cent and in some cases higher. There was no concerted move, the garages acting individually and making the cuts at different intervals.

Owners to Sell Gasoline

MILWAUKEE, Feb. 25—The United Consumers Corp., organized some time ago by Milwaukee and Wisconsin capital to deal in motor car equipment and supplies on a co-operative basis, has completed plans for establishing seven filling stations as the first series of a chain of gas and oil sales branches. The initial installations will be at Cedarburg, West Bend, Oconto, Waupaca, Portage, Algoma and Kewaunee, Wis. Each will be of solid concrete construction, 14 x 20 ft., with hot water heating plants.



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Letters Are the Basis of This Sales Plan

NASH Distributing Co., with a series of letters and an aggressive campaign directed from the Detroit branch, aided by the factory efforts, is meeting with great success. H. A. Bauer, head of the Nash Distributing Co., has put into execution a merchandising plan which is far removed from the house to house canvas, or the doorbell solicitation, but it appears to be getting results equally as well or better.

The company is taking from the State license lists the names of all car owners, securing other names from credit agencies, and the salesmen themselves in their journeys about the city are jotting down the license numbers of cars they meet in the streets which appear to have been run two or three years, with the idea

that the owner of that car is about ready to become interested in a new one. With these names in a card index file, a short, concise letter is sent to each person signed by Bauer and written on the company's letterheads and with typewriter.

The first letter reaching the prospect, not the stereotyped, mimeographed or multigraphed sort, but a personal letter, informs him that the company has learned he has been driving a certain make of car for a year or two, and the writer is wondering if he is not nearing the time when he will be in the market for a new car. The letter goes on to say: "Mr. Blank, one of our salesmen will call upon you within a few days to discuss this matter personally," and adds that if for any reason the recipient will not be in a position to receive Mr. Blank, or would rather call at the salesroom, would he please so notify the company. Before

that action can be taken, however, almost simultaneously with the arrival of the letter, Mr. Blank is on the ground with a forceful personal argument on the Nash car, and with a sales talk designed to convince the prospect that the time now is propitious for him to change from the car he is driving to a new one and that new one a Nash.

No matter what the outcome of the salesman's visit, a second letter from Bauer follows a few days later, in which the prospect is informed that Bauer is referring his name to Voorhis, vice-president and general sales manager of the factory in Kenosha, with the request that Voorhis write him personally, giving him more details about the Nash car and its adaptability and availability. Meanwhile, the entire list of names secured from license plates, credit agencies and picked up on the streets, is sent to the factory and a series of five letters are being drawn up to be sent to each prospect.

The first is in the nature of a personal letter from Voorhis, in which he calls attention to the fact that he has been requested to write the prospect by the Detroit branch, and contains no literature of any kind, the letter being short and to the point and simply an introduction to the series that is to follow.

Within a few days a second letter, telling something of the organization and its inner workings and accompanied by a small folder, reaches the prospect, who by this time is convinced that the company really considers him in the nature of a customer and naturally begins to think that maybe the company is right. By the time he has received the third, fourth and fifth letters, each of which is accompanied by literature explaining some detail of the car that is extraordinary or considered better than on other makes, he is ready to talk purchase and will give the salesman the cooperation of listening to his sales talk, or mayhap he will visit the salesroom in person to begin negotiations that finally result in the purchase of a car.

The plan has worked admirably. The letters focus the attention of the prospect and put him in a receptive mood for the sales argument that follows.

There Are Several Good Ideas in This Sales Plan



Very often the sale of a truck depends upon the ability of a dealer to supply a peculiar type of body. We do not know who it was that sold the chassis for this rolling fish market, but it is certainly a mighty fine ad. This novel market supplies fresh fish to inland New Jersey towns for a merchant of Atlantic City

We Thank You

INITIAL dealers are often hard to get, and once their first order is secured it is a case of tact in the sales promotion department to keep these dealers "sold." So many large companies overlook the personal touch in



following up customers. This is due to the fact that there are so many accounts to handle, the minor details are neglected.

After an initial order is received the sales promotion department of the U. S. Tire Company sends out a postal card similar to the one here shown. It means little expenditure, but the effect is worth while. The dealer is glad to think his order, however small, is appreciated by the company with whom he is doing business.

This is a novel idea which might very well be worked out by many business houses.

Demonstration Sold Oil for This Garageman

SAFFOLD GARAGE, Cleveland, increased winter sales of an oil that "flows freely at zero," by visibly demonstrating this feature. A one-gallon can of this oil was bracketed to the top of the gas pump at the curb on a hinged rack so that it could be tipped to an inverted position by moving a long wooden handle. A 1/32-in. hole was drilled through the stopper seal of the can to permit a fine stream of oil to trickle down about 6 in. into a funnel

leading to a pan concealed in the base of the pump housing. The can and funnel were mounted high in order to prevent small thefts of oil. A card explaining the "cold test" was tied to the handle. On bitter cold days many motorists tried tipping the oil can and, impressed by its fluidity, became regular users of this particular brand of high-priced motor oil.

Getting Jobber Co-operation in Equipment Sales

ABOUT the only communications the average dealer sends his jobber are in the nature of complaints on prices, delivery, defects, or saleability. One Cleveland accessory dealer, Edgar M. Thom, makes it a point to write his two principal jobbers optimistically, at least once a month, listing new items which customers have inquired for or which are featured on the latest cars and bodies; also relating any novel or successful methods he has used to accelerate his turnover of certain items. Results of such co-operation are not always intangible, as Thom has received from the jobbers a number of sales helps and new articles for his stock, which have been supplied to competitors weeks later and sometimes not at all.

Gives Specialist Service

THERE are certain weak points in even the most popular makes of cars and trucks. By studying the same, the garage conducting a general repair business can generally work up a reputation for curing chronic troubles of minor or serious nature and get a good deal of business that ordinarily goes to the service station. Hancock Garage, Detroit, has tried this plan with success. It may be a thin fan belt, a wasteful carbureter, an undersized battery, leaky gaskets, cheap or exposed ignition or lighting wires, "mushy" brake lining, or a score of other typical faults. The garage that knows these troubles on particular cars and caters to them can get a lot of work on such jobs, providing its replacement articles are of a high grade.

Readers Help Write This Dealer's Ads.

MANY people feeling a bit flattered when asked to take a part in the construction of an advertising campaign, a Milwaukee dealer plans to use a series of coupons in his advertising this spring. He will ask readers to send in the coupons, "to give me an idea of how the various newspapers pull in quantity of appeal." An inexpensive souvenir will go to every one who sends in a coupon. The advertising in connection with this will, of course, feature the make of car, tires and other articles sold by this dealer, but special emphasis will be placed on the valuable assistance the reader may give in determining the advertising policy for the season.

Insurance Policy a Clever Ad.

A CLEVER bit of publicity is used effectively by the Wichita Automobile Co., Wichita, Kan., in which the service department is featured, with particular attention to the parts stock.

The pamphlet is in the form of the usual insurance policy, folded and numbered in a manner that makes its appearance realistic, and contains the following provisions:

"The Wichita Automobile Co. insures Reo passenger car and speedwagon owners against loss of time waiting for parts by always carrying on hand at Wichita, Kansas, more than ONE HUNDRED THOUSAND DOLLARS worth of parts; and furnishing their dealers and owners



A fac-simile of the policy that "insures" satisfactory service

parts ordered by telephone, telegraph or letter the same day the order is received. Reo service is real service because Reo service never fails. It is your insurance policy for long, continuous and satisfactory operation of your Reo passenger car and speedwagon.

"Men and machinery, even the best of both, will at times get out of order, and it is then that service counts. The only difference between the value of a dead motor car and a dead horse is that the motor can be brought back to life. The difference is called SERVICE."

Below this is shown a picture of the building. The inside pages are devoted to pictures of Reo cars and commercial wagons and of the bins in which parts are stored.

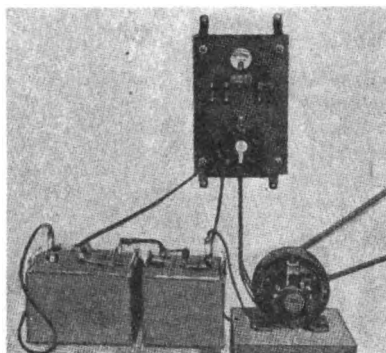
Pictures Sell Used Cars

THE Kam Kaderbeck Co., distributor of the Kissell and Auburn cars in Buffalo, continues to sell used cars by picturing the machines in display advertising. The company says it has found the plan effective.

Automotive Equipment

MAIN BATTERY CHARGING SETS

These sets are furnished in three sizes, and each includes generator and switchboard, complete in every respect ready for connection to the shop line-shaft. Set No. 1 has a capacity of 250 watts and No. 2 600 watts. The nominal charging voltage is 30; that is five 6-volt batteries in series. These sets may also be used for lighting service. Prices, Set No. 1—\$95., Set No. 2—\$135. Main Electric Co., Cleveland, O.



Main Battery Charging Set



Eck Vaporizer and Primer

per pair, single spring, front and rear—\$17.50; price, per pair, double spring, rear—\$20.—Hayes Shock Absorber Co., 1118 South Third Street, Minneapolis, Minn.

ECK VAPORIZER AND PRIMER

This device may be used as either vaporizer or a primer. In the former case the tank is filled with water and the latter with gasoline. It is mounted on the back of the dash, and is connected with the intake manifold by a piece of tubing. It is controlled by means of a button on the instrument board. Price—\$6. Another model is made which is connected with the gasoline line, so that the device automatically fills itself when used as a primer. Price—\$7.—Eck Vaporizer & Primer Co., Rochester, N. Y.

MANLEY GARAGE CRANE

This crane has a capacity as a floor crane of $1\frac{1}{2}$ ton, and as a wrecking crane 2 tons. The beam is composed of heavy angles built into an A shape. The top extension is quickly applied with two bolts and nuts. The base is mounted on roller bearing castors. The weight is 500 lbs. Its construction is such that it is adapted to a wide range of uses.—Manley Mfg. Co., York, Pa.



Manley Garage Crane

SCHRADER VALVE CAPS

The loss of valve caps when changing or inflating tires is a very common source of annoyance and, lacking a replacement cap, motorists frequently drive their cars with the valves exposed to dust and dirt. This little package of five caps will obviate this difficulty. Price, 40 cents. — A. J. Schrader's Sons, Brooklyn, N. Y.



Schrader Valve Caps



Gordon Tires and Tubes

GORDON TIRES AND TUBES

This tire is made in both cord and fabric. The former are guaranteed for 8000 miles and the latter for 6000. The tubes are built up of many sheets of rubber, and the valve patch is vulcanized with the tube. The fabric sizes run from 28 x 3 in. up to 37 x 5 in., and the cord from 30 x $3\frac{1}{2}$ up to 36 x 6 and 37 x 5 in.—Gordon Tire & Rubber Co., Canton, O.

STONE SHOCK ABSORBERS

These absorbers are for Dodge Bros. cars, and all others using a three-quarter elliptic spring. This device is of the spring type and replaces the spring shackle. Price, per pair, \$10.—Stone Mfg. Co., 1502 Michigan Avenue, Chicago.



Stone Shock Absorbers



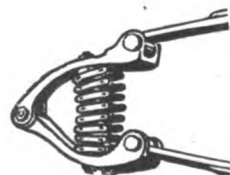
King Socket Wrenches

KING SOCKET WRENCHES

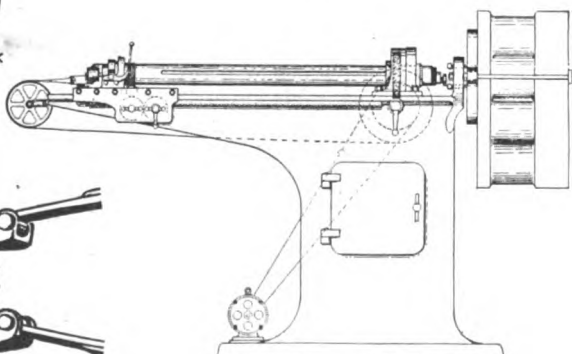
There are 12 sockets with this wrench set of the following sizes: $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{2}$, $2\frac{1}{2}$, $3\frac{1}{2}$, $4\frac{1}{2}$, $5\frac{1}{2}$, $6\frac{1}{2}$, $7\frac{1}{2}$, and $8\frac{1}{2}$. This provides for S.A.E. and U.S.S. cap screws from $\frac{1}{4}$ up to $\frac{1}{2}$ in., and U.S.S. nuts from $\frac{1}{4}$ to $\frac{1}{2}$ in. Handles included are T-handle, 90 deg. angle bar, 12 in. extension bar and universal joint. Price—\$7.—King Pressed Steel & Mfg. Co., Boston 58, Mass.

HAYES SHOCK ABSORBER

This device replaces the spring shackle. They can be installed front and rear on Maxwell, Stephens, Moon, Dort, Nash, Dodge, Oakland, Hudson, Davis, Buick, Hupmobile, Studebaker, Oldsmobile and Peerless. Cars using cantilever springs all around cannot be equipped, but where this construction is used only in the rear the front springs can usually be equipped. Some changes must be made for installation on cars using three-quarter elliptic springs. Price,



Hayes Shock Absorber



Eagle Cylinder Grinder and Reamer

EAGLE CYLINDER GRINDER AND REAMER

A combination machine for reaming and grinding. The cylinder block is clamped on the right hand end of the machine as shown in the illustration. To assist in centering the work, the grinding bar has a centering cone, and the face plate has three-point adjusting screws. The reamer and grinding wheel are easily interchangeable. The machine is said to be universal.—Eagle Motor Works, 1411 East Franklin Avenue, Minneapolis, Minn.

What New York's Snow Removal Record Means to the Trade

MUNICIPALITIES in the future are going to purchase large quantities of motorized snow removal equipment—particularly trucks and tractors. States, counties, cities and even the smaller villages are coming to a realization of the fact that it is true economy to keep the roads and highways—the arteries of commerce—open all through the winter.

To do this it is necessary to purchase equipment and organize. Dealers can do much to bring the subject before the governing bodies of the communities, to prove the effectiveness and economy of scientific snow removal, and they should be particularly active in advancing the idea because they will benefit not only through the greater utility of the product they sell due to making it possible to drive passenger cars and commercial vehicles more in winter than heretofore—but because it *opens a market for their products.*

THERE is a lesson in the effectiveness of motorized snow removal preparedness in the recent experience of New York when in less than 24 hours 12 to 13 inches of snow fell—the heaviest snowfall in a similar space of time in 30 years. The city came through with flying colors. More than 20,000 men and 3000 vehicles cleared the streets of the metropolis in remarkably short time and and prevented any serious delay in traffic.

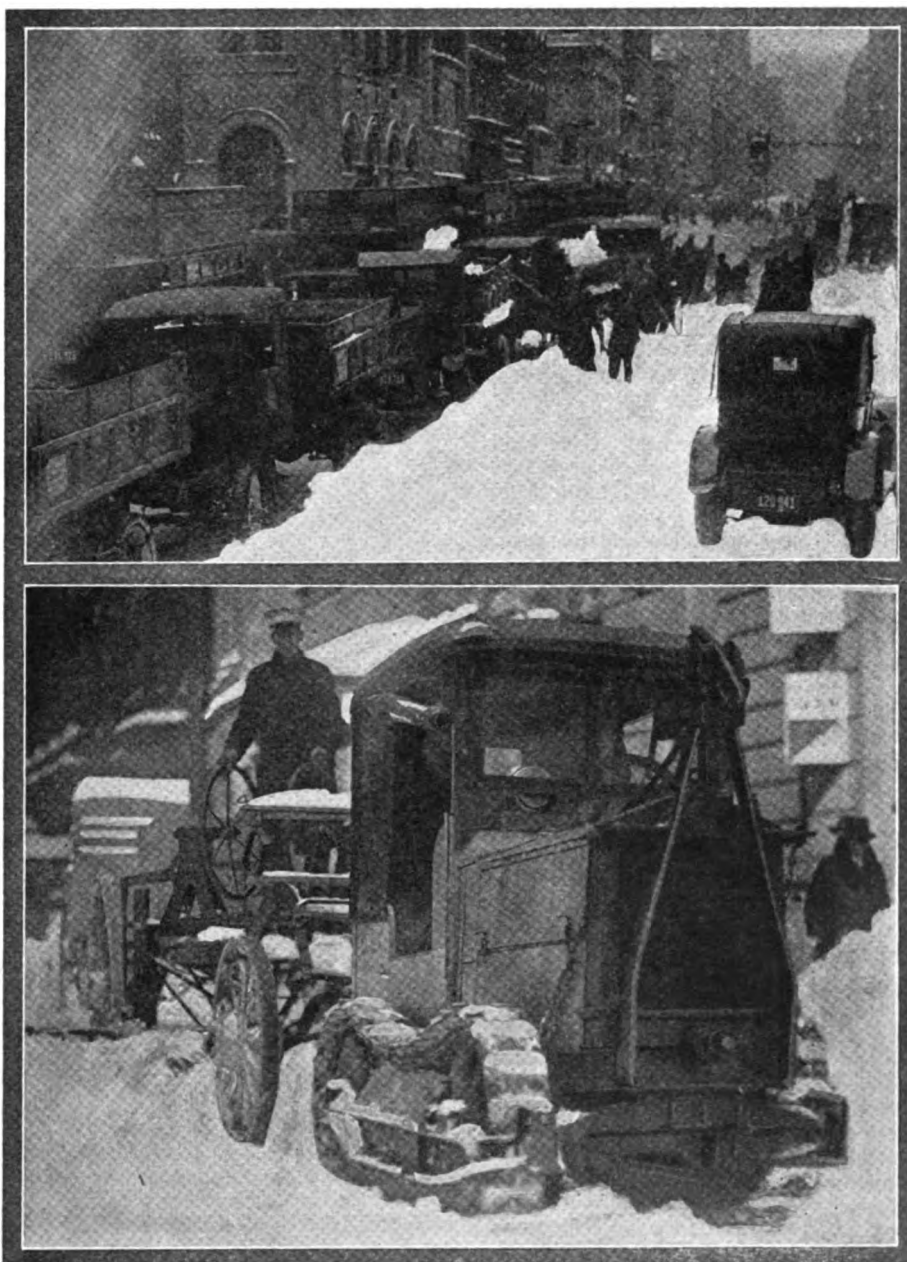
There were four features of the city's campaign of material assistance in making this possible.

1—The equipment, consisting of 150 tractors, 350 trucks, over 600 push plows, about 150 4-wheel pull plows, 1800 department carts and about 850 contractors' vehicles went to work very nearly on schedule time.

2—The city's plan of training as many men as possible, begun last July in four different schools, in driving and handling this equipment made efficient work possible. By Dec. 1 these four schools had trained 649 men as drivers of trucks and tractors, so that all these men passed their licensing tests and became licensed chauffeurs.

3—For the purpose of snow removal, the entire city was divided up into small zones, using existing fire zone division with a fire station as the center of each zone. The equipment was distributed in these zones at the fire stations and every man assigned to his zone. At the same time each police station had a list of the snow fighting men living on the beats in that precinct and the police were instructed to telephone to the police station the moment snow began to fall and get a list of the men living on their beats.

4—The street railways have about 3,000,000 square yards of surface from which they are required to remove the snow altogether, not merely push it off the tracks onto the street. By agreement, the railway lines were given full streets from houseline to houseline approximating this area of 3,000,000 square yards, which they were to clean entirely and which they did clean. In return, they were allowed to clear the tracks with their sweepers and the city took care of the snow thus cleared.



Organized snow removal forces with the necessary equipment prevented a traffic tieup in New York a few days ago when records for 30 years were broken by a storm that deposited 12 inches of "the beautiful" in less than 24 hours. The illustration above shows how the snow was removed after it had been piled by plows drawn by tractors.

Ford Expects 70,000 March Total

DISMISSES REPORTS OF FINANCIAL NEED

Retail Sales Make Inroads in Surplus—Kanzler Probable Production Manager

DETROIT, Feb. 25—In an interview with a representative of Motor World, Henry Ford declared that 15,800 men now are working in the Highland Park plant. Production ranges around 2200 cars daily. Finished cars, together with engines and parts for the assembly branches, constitute the Highland Park output.

Ford said the company had 95,000 cars in the hands of dealers when the plant closed just before Christmas and 30,000 more under construction at branches. The 30,000 were finished in January while the Highland Park plant was closed. Retail sales aggregating 57,000 cars in January liquidated the 30,000 in the assembly branches and 27,000 of the 95,000 in the hands of dealers.

Retail sales the first half of February were 42,000 and total production 35,000. If this ratio of sales continues approximately 50,000 of the surplus will have been liquidated this month. Ford said the March dealer requirements would be 70,000 and the plant would build 3100 daily in March.

Uninterrupted operation and increases in the working force, as well as an output in conformity to demand, will depend entirely on steel prices, Ford said. The River Rouge plant has not been closed at any time and approximately 1000 men have been employed there continuously. The force was increased today to 2600, manning the blast furnaces, building tractors and doing other work. The production schedule for tractors now is 100 daily.

Ford dismissed questions regarding financing by saying, "The best indication of our position is the fact we are going to build 70,000 cars in March and we could not buy materials and meet payrolls without money."

Full Confidence in Future

Ford is highly optimistic and has full confidence in the future of the industry, as well as its continued improvement. He said the rotating system of employment would be continued until the main factory is again in normal production. All men who are to be retained permanently will be given an opportunity to get part time work. No wage reductions on specific jobs will be made, Ford said, and there will be no reduction in the minimum wage.

E. C. Kanzler, brother-in-law of Edsel Ford, is apparently functioning at the Highland Park plant as production man-

GOODYEAR INCREASES TO 60,000 PRODUCTION

AKRON, Feb. 26—The Goodyear Tire & Rubber Co. Tuesday went on a production basis of 60,000 tires weekly increasing from 38,000 and increasing the operating time from four eight hour days each week, to five eight hour days, with no additional men being put on. This is the first substantial increase in production announced by any Akron rubber company and is the first increase enforced by Goodyear since the beginning of re-financing negotiations. The company at its peak last summer, was making 33,000 tires daily in the Akron plant. Goodyear's announcement coupled with a shipment of 30,000 tires to Henry Ford by Goodrich company indicated a steady upward trend in the tire industry.

ager and Charles E. Sorensen as general manager. It is understood the policy of the company in future will be to abolish titles and that six or seven men will handle the work. They will specialize along certain lines but without titles.

Nash Builds New Unit

MILWAUKEE, Feb. 28—The Nash Motor Co. of Kenosha is starting work this week on the construction of another machine shop unit of its new four-cylinder car division works in Milwaukee. The main shops were completed late last fall and the plant is now in operation on a regular schedule. The present work is a continuation of the original plans of the Milwaukee plant project, which will cover about two years of construction.

Stewart Buys Van Sicklen

CHICAGO, Feb. 24—The Stewart-Warner Speedometer Corp. has acquired the speedometer business and certain assets of the Van Sicklen Speedometer Co. of Elgin. The purchase did not include the capital stock which will retain its corporate entity. The Van Sicklen Co. is controlled by John N. Willys interests and has a new factory at Newark, N. J., which never was occupied.

Grant Discontinues Trucks

CLEVELAND, Feb. 25—Grant Motor Car Corp. has discontinued the building of trucks indefinitely. The company will concentrate all of its manufacturing facilities upon the production of Grant passenger cars, on which it reports a steady flow of orders.

PAIGE AND PACKARD INCREASE OPERATIONS

Former Sets Schedule of 1500 Cars for March—Truck Business Better

DETROIT, Feb. 25—Paige-Detroit Motor Car Co. is on a schedule of 40 cars a day operating four days a week with the plant's entire force of approximately 3,000 men working. According to Paige officials there are 800 actual orders on the books, and a production schedule of 1500 cars for March has been outlined.

Paige dealers throughout the country according to factory officials report an inclination on the part of the public everywhere to assume a buying attitude, and while actual orders have shown no great spurt, there is every indication, dealers say, that brisk spring business will begin during March and increase steadily.

The same optimistic report was given out by officials of the Packard Motor Car Co. It was said at the Packard plant that the average for the present week was far in excess of that for the same week last year in point of actual orders. The Packard plant is operating with only about 1,000 employees and building approximately 25 per cent of the normal schedule. This production will be maintained despite the signs of improvement for the time being. Packard officials say, however, if sales continue to increase in the next few weeks as they have in the last two, the factory force and output will have to be materially increased to keep pace with the demand.

Truck Industry Improved

A slight improvement in the truck industry is noticeable according to officials of one of the largest engine manufacturing companies, who declared truck manufacturers are getting under way and orders received for engines for trucks during the last few days indicate confidence in returning business in that end of the industry. The same official—though unwilling to be quoted—declared orders from passenger car manufacturers show great improvement, and cited orders received within the last three days from four companies in such volume that his own company which had been working intermittently for the last few months, had been started on a continuous production schedule.

The concern mentioned naturally gets its orders about 30 days in advance of those of other parts makers and about the same period in advance of actual production at the plants.

Sales Increase Throughout Country

FEBRUARY RUNS HIGH IN CAR DELIVERIES

Actual Turnover to Customers Equal to 1920 Though Sales Run Low

NEW YORK, Feb. 26—So far as cars actually sold and delivered are concerned this month has developed a normal February sales volume. The demand for cars does not compare with the mad pressure of a year ago, but the results in actual deliveries are about equal because last year the dealers couldn't get the cars they needed on account of the traffic conditions, and this year the reduced factory schedules are barely meeting the demand.

With a few exceptions, and these principally among the higher-price cars, the New York retail market has developed a gradually increasing volume of business that is regarded as entirely satisfactory, considering general conditions.

One large distributor in the medium-price class, whose product is in the country's ten best sellers, and whose contract calls for 6 per cent of the factory output, has found no difficulty in disposing of more than 10 per cent of his factory's output in the past month. This distributor's actual delivery of cars to owners follows a schedule approximately the same as in February last year. At least three other distributors of medium-price cars in the New York territory are running ahead of actual deliveries during this period last year.

In the higher-priced cars there has been a lull of several days following the tapering off of a fairly good market that developed just previous to the New York show early in January and reached its peak the latter part of January. But even with this condition existing to-day, there is considerable faith in the development of a stronger market as soon as the weather becomes settled. It is pointed out that February usually is a low sales month in this class—that the enclosed car season is closing and the open car season still a few weeks hence.

Wholesale Business Steadier

The wholesale passenger car market is becoming somewhat steadier and is showing a healthful, sturdy increase. The snow storm of Sunday had a very appreciable slowing down effect in the outlying districts, especially in upper New York, Connecticut and rural districts of New Jersey.

After experiencing a decidedly improved sales volume early in the month, the used car market is showing signs of sagging again. Most of the New York used car dealers are carrying heavy stocks and closely watching production schedules in the new car field for indica-

SEVEN SALESMEN SELL SEVEN CARS IN 7 DAYS

ATLANTA, Feb. 24—A new record for this section of the country at this time of the year, especially considering the fact that the automotive industry is but just emerging from a long period of inactivity, was recently established by the Brownell Auto Co., of Birmingham, Ala., Dodge Brothers' distributors in that territory.

The company employs seven retail salesmen. Deciding to GET BACK TO BUSINESS on a really worth-while scale, if it were possible to do so, the company's salesmen went out and worked almost night and day to sell Dodge Brothers' motor cars. On Saturday, at the end of a week's effort, the various sales that were in the process of consummation "came to a head," as it were, and on that day seven Dodge Brothers' motor cars were sold. It is interesting to note, too, that the sales were evenly divided, each of the seven salesmen completing one sale on that Saturday. Dealers of the section are inclined to believe this is a record, even in prosperous times. At any rate, it appears to evidence the early return to normalcy.

tions of the much-talked-of new car shortage which is expected by some to develop late in the spring due to the reduced production programs in most of the factories.

The truck market, both wholesale and retail, is still showing the spotty tendencies that have characterized it for several weeks. While there is some general improvement, it has been slight.

Baughman Holds Best Meeting

TAMPA, FLA., Feb. 24—The most successful convention in the history of the G. Norman Baughman Co., and the largest of any jobbers' conventions in the South, was held here early in February. Enthusiasm reached a high pitch during the four-day business session, and the members of the organization have returned to the field determined to put over larger business during the coming year regardless of conditions. The representatives of many of the large automotive equipment manufacturers were guests. At the close of the business session a two-day automobile trip through the central part of Florida was arranged for the special guests. During the convention particular emphasis was laid upon the education of dealers for better and cleaner business.

KANSAS CITY DIGS HOME FOR GUS GLOOM

Cause of All the Business Pessimism Laid Away Midst Annual Festivities

KANSAS CITY, Feb. 25—The annual dealers' meeting given by the Kansas City Motor Car Dealers' Association to the retail automotive merchants of the territory during the motor show gave evidence by attendance, high spirits and response to optimistic addresses, that 1921 is going to be a good year in this territory. The luncheon was held in the ballroom of the Hotel Muehlebach. John A. Butler, president of the association, acted as toastmaster, E. E. Peake, secretary, assisting in the preliminary services.

These services gave the keynote for the whole meeting—indeed, for the opening of the 1921 season of selling motor equipment. For they were the obituary services over "Gus Gloom." The "stunt" has been put on at several civic organization meetings here in the past two months.

It starts with the appearance in the luncheon hall of a cadaverous, silk-hatted, lugubrious pessimist, face chalky, lips blue, complexion spotted, who passes around muttering dolefully "Business is Rotten," "It's going to rain all next week." Finally somebody rises to protest against his depressing presence, although he has created a laugh at each table where he stopped. Several persons exclaim that he should be ejected, or slain.

A husky motor car dealer rushes up to him, bangs him with a bladder, and he falls. An undertaker is called for; one responds, announcing that he with motor equipment can give quick service. A casket is wheeled in, Gus Gloom is deposited in it, and a minister delivers a sermon. A real minister this was, the eloquent Dr. E. E. Violette, pastor of a Kansas City church. He delivered a strong address on optimism, repeating verses on "Thank God for Work." Gus Gloom was taken away, amid the hilarious applause of the gathering.

Speeches were made by Neal G. Adair, editor of Motor World; A. V. Comings of the Chilton publications; Forrest Alvin, president of the United States Motor Truck Corp.; Harry G. Mook, manager of the N. A. D. A., and E. E. Peake.

Brockway on Full Operation

CORTLAND, N. Y., Feb. 24—The Brockway Motor Truck Co. has resumed operations with its full force of 200 employees. Preparations are being made for the enlargement of the plant and rather extensive building operations are in progress.

ALL FORCES COMBINE FOR ATLANTA SUCCESS

Southeastern Associations and Dealer Organizations Ar- range Attendance

ATLANTA, March 1—Everything is in readiness for the opening here Saturday, March 5, of the Great Southern Automobile Show, scheduled to run during the week at the big Atlanta Auditorium.

Though the building provides more than 30,000 feet of floor space, every foot has been taken for several weeks, and a large number of applications for space had to be turned down by the committee in charge. It is gratifying to note, too, that a large number of the manufacturers of the North and East are displaying considerable interest in the show and several have notified the Atlanta Automobile Dealers' Association that they will have representatives here during the week. A number of applications for space from automotive equipment jobbers and manufacturers had to be turned down for lack of accommodations.

During the week there will be a special meeting of the Georgia Automotive Dealers' Association, which is expected to bring to the city about 400 of the leading dealers throughout the State who are members of this organization. Headed by Volney Williams, of Waycross, Ga., the new president, the dealers will visit the show in a body.

On Friday and Saturday, March 11 and 12, the Southern Automotive Equipment Jobbers' Association will hold its annual meeting here in connection with the show. Representative firms in all of the Southeastern States are members of this association, and virtually all of them are expected to attend the meeting and take in the show while here. Many of the factories manufacturing automotive equipment have notified E. F. Yancey, of Atlanta, president of the association, that they will have their representatives here for this meeting.

During the week there will be a number of group meetings which the Atlanta distributors are arranging for their dealers in the Southeastern territory, which will include banquets, luncheons, sales conferences and conventions. There will be at least ten or fifteen such meetings during the week, which will bring to Atlanta hundreds of dealers from the various Southeastern States. Meetings of this nature are scheduled for every day the show is in progress.

Style Week to Be Feature

The retail merchants of the city will have a spring fashion show and style festival during the week in connection with the automobile show, while the various manufacturers and wholesalers have arranged to hold a special "Merchants' Week," from March 7 to 12, for the benefit of their merchant customers of the Southeast. These two events are expected to bring thousands of additional visitors to the city who will doubtless

attend the automobile show while they are here.

By far the most interesting feature of the automobile show is the enthusiasm that is being displayed by the retail salesmen of the various Atlanta automobile dealers and distributors. As a matter of fact, many of the dealers state that it is really their salesmen who are responsible for the show. They have been up against a "stone wall" of sales resistance for some months now and they see in the coming show an opportunity to recuperate.

KENTUCKY ANTICIPATES QUICK TRADE REVIVAL

LOUISVILLE, Feb. 26—Quick reaction from the recent depression in the automobile business and a renewal of demand by the summer months, were predicted at the first annual banquet of automotive dealers of Kentucky and southern Indiana, as guests of the Louisville Automobile Dealers Association at the Seelbach, Tuesday night.

The dinner was attended by approximately 400 automobile dealers and other business and professional men. Prince Wells, president of the association, who left a sick bed to be present, was in charge in opening the program, and announced that the banquet would be made an annual affair in connection with the show.

Speakers included George M. Graham, vice-president of the Pierce-Arrow Motor Car Co.; Harry S. Leyman, president of the Leyman-Buick Co., Cincinnati and Louisville, and George C. Hubbs, general manager of the Grant Motor Car Corp. of Cleveland. William A. Thomas, vice-president of the local dealers' association, was toastmaster.

Maine to Teach Tractor Use

ORONO, ME., Feb. 26—A tractor school will be a special feature of Farmers' Week this year at the Maine College of Agriculture. It will open Monday noon, March 28, and be continued until Saturday noon, in charge of Prof. Walter D. Emerson of the department of mechanical engineering, University of Maine. The course will consist of lectures and laboratory practice. Gas engine and tractors will be dismantled and put together, the mechanism and function of every part being fully explained.

"U AUTO See 'em at the Coliseum."

That's the slogan for Des Moines' automobile show, which will be held at the Coliseum March 2 to 10, Miss Mildred Murphy of Mason City having won a \$10 prize offered for the best slogan by a Des Moines newspaper. Two others sent in the same slogan, but Miss Murphy was first in and was awarded the money by Dean Schooler and C. G. Van Vliet, managers of the show.

ANNUAL OPEN HOUSE DRAWS BOSTON CROWD

Washington's Birthday Event Exceeds Other Years in Pretentiousness

BOSTON, Feb. 25—Washington's Birthday witnessed the annual opening of the spring motor trade here, and dealers all held open houses for the occasion. There were special features also.

One was the Cadillac so-called Recognition Day, celebrated with much ceremony and a parade of Cadillac cars beginning with the 1902 Model A and showing at least one car of every model built by the company since its inception. Boy Scout buglers announced the coming of this unique cavalcade. The route was over the downtown business and financial districts.

Dodge Brothers' special feature was Victor Herbert, foremost of American composers. At the Henshaw Motor Co. music especially composed by him in honor of Horace E. Dodge was publicly played for the first time here.

In the showrooms was a typical camping scene complete even to the catch, occupying the central portion of the salesroom. A complete camping outfit, such as can readily be carried in a car, had been set beside an actual pool in which real fish disported.

Lieut. Gov. Alvan T. Fuller, originator of the idea, also had his Packard establishment visited by the many Packard owners. As usual, the day was featured with decorations and music. A tour of inspection through the big plant was continued this year and gave visitors a chance to note how the place has grown and what is being done in the home of Packard in Boston.

Every dealer had an exhibit of some kind to meet the spirit of the holiday.

G. M. C. Truck Branch Opens

MEMPHIS, TENN., Feb. 25—A Memphis branch has been opened here of the General Motors Truck Co., adding considerably to the recognition of Memphis as a distributing point for trucks. The handsome building formerly occupied by the Hernando Motor Co. is occupied. J. N. Magna, formerly at the St. Louis branch, will take charge of the local office. With him is J. K. Dobs, formerly with the Union Motor Co. The G. M. C. account was formerly handled by the Union Motor Car Co., but was discontinued when the firm decided that because of crowded floor space it would devote its entire sales effort toward passenger car lines.

Madison Pools Used Cars

MADISON, WIS., Feb. 24.—A notable development in used car merchandising growing out of the unusual conditions of the period is the formation of a Used Car Exchange by the leading dealers of Madison, capital of Wisconsin. It has been incorporated under the name of Madison.

"BUY IT NOW" SLOGAN AIDS SEATTLE SALES

Movement Toward Getting Orders in for Spring Delivery Develops Satisfactorily

SEATTLE, Feb. 26—The early movement of new cars for spring in Seattle and western Washington generally may well be described as satisfactory. While there has been a noticeable weakness in the usual demand for the higher priced cars at this period of the year, there has been a strengthening in the demand for the medium and lower priced cars reported in many quarters where there is marked optimism afloat over the prospects for the season.

Dealers generally are joining in an educational movement to encourage the public to "buy now," claiming that there is good reason to believe that a shortage of cars may develop this summer as the result of the temporary closing down of many factories during the winter.

Typical of the form the educational campaign is taking in Seattle is the following advertisement, published under the authorship of the Seattle Motor Car Dealers' Association:

"When the Open Road Calls in the Spring:

"Then you want that new motor car!

"Then you'll try to get that special model that you and the family have set your hearts on.

"And you may be disappointed!

"Yes, I'm going to buy a new motor car. But not now; no, I'll wait until late spring."

"Why, man, there is a regular army of you.

"What will happen if all of you get the idea to order that new car at the same time? Why, all of the factories in the country, working day and night, will not be able to supply your demands.

"If you want a car in the summer for the summer's use—buy it now!

"If you can afford a motor car, and need one, order it today!

"The majority of dealers can fill orders NOW, but if you folks keep your present idea of buying in the late spring, there simply won't be enough cars to go around.

"And your new car won't do you much good for summer touring if you don't get delivery on it till next fall."

There has been an undeniably healthy influence created by the educational campaign.

Wisconsin Tire Men Organize

MILWAUKEE, Feb. 24—The Wisconsin Tire Dealers Association has been organized with a membership of more than 250, as the result of the extension of organizational effort by the Milwaukee Tire Dealers Association during the last three years. Officers were elected as follows: President, James Cudlip, Oshkosh; vice-president, Henry O. Stenzel, Milwaukee; second vice-president, V. H.

Bosworth, Milwaukee; secretary, Edwin H. Berge, Milwaukee; treasurer, J. E. Thompson, Milwaukee. A second meeting will be held March 15 to adopt a constitution, by-laws and otherwise perfect the organization. The new association has opened temporary headquarters in the offices of the Milwaukee Association of Commerce.

MILWAUKEE COLD WAVE BENDS SALES CURVE DOWN

MILWAUKEE, Feb. 28—The sales curve of passenger car business in the Milwaukee dealer trade showed somewhat of a downward trend during the last ten days of this month, due largely to the arrival of a cold wave which was the first since the holidays, and the most severe of the present winter, with the possible exception of a frigid period about the middle of November. The early part of February was fairly active, considering circumstances. Dealers say they are offered some business which they are unable to accept, due to the accumulation of used cars still existing, or the inability of prospective purchasers to properly finance their buys. Prospects for business during the month of March are regarded as favorable. The principal effort continues to be to move used car stocks.

GASOLINE PRICES DOWN EXCEPT ON WEST COAST

NEW YORK, Feb. 24—Gasoline prices have been reduced from 1 to 6 cents a gallon in the principal cities east of the Rocky Mountains, but no reductions have been made as yet on the Pacific Coast. Reductions of 3 cents have been made throughout the Eastern territory and of 4 cents in the Middle West. In the mid-continent and Southwest territory prices have declined in some cities as much as 6 cents a gallon from the peak of 1920. The lowest price is in Kansas City, where it is 21 cents a gallon, with St. Louis second at 22.5 cents, Chicago and Houston, Tex., are tied for third place at 23 cents. The price is highest at Butte, Mont., where it is 31 cents.

Auto-Lite Adds to Force

TOLEDO, Feb. 24—The Electric Auto-Lite Corp., a subsidiary of the Willys Corp., has called back to work nearly 200 former employees, making about 400 now employed out of a normal 3000. While the outlook for future business remains uncertain, it is more encouraging than it has been for some time.

THE May Co., one of the big department stores of Cleveland, has been designated distributor of the National Speedway tires in Cleveland and adjoining territory. The announcement was made after the May Co. had placed a large order for tires with the company.

FEBRUARY BRIGHTENS OMAHA SALES RECORD

Change for Better Expected to Become Decided Following Show in March

OMAHA, Feb. 24—A slight upward tendency in sales since the first of February has encouraged distributors to expect a decided improvement in conditions following the show, to be held March 14-19, on the eve of the natural spring selling season. Though wholesale business in the territory is practically a minus quantity and retail has been very slow since June, there has been quite a bit of city selling so far in 1921. Quite a few used cars have been moved, mostly on the acceptance corporation time payment plan, and several aggressive dealers in standard lines, without long trades, have been able to move a fair volume of new cars. These dealers have been doing a lot of demonstrating.

Show space was snapped up as soon as the application blanks were ready, and the dealers promise some interesting merchandising developments.

Opening of wholesale business is not expected until April and May, owing to the poor condition of the roads and the probability that farmers, until then, will continue to hold grain in the hope of higher prices, thus limiting their own buying power and the circulation of money in the territory.

Automotive equipment has not felt much of the slump suffered by passenger cars and trucks. Jobbers who have kept their sales staffs on the road have done well all winter.

Show Succeeds Billy Sunday

FAIRMONT, W. VA., Mar. 2—The tabernacle which housed the Billy Sunday evangelistic campaign, just over here, will be occupied from to-day to Saturday, by the first automobile show in the history of Fairmont.

The tabernacle will be cut into twenty-five spaces which will be occupied by automobile displays while the platform will be reserved for exhibitions.

The sponsor of the entertainment is billed as the Fairmont Automobile Association. While this organization is not exactly the Fairmont Automobile Club the show will have the backing of that organization as well as of the Chamber of Commerce.

Curran to Market Equipment

DETROIT, Feb. 24—Curran Motor Products Co., with offices at 2018 Park Boulevard, has been organized with a capital of \$100,000 to market accessories, chiefly the inventions of Dr. E. T. Curran of this city. The company's output will include an automobile thermometer, a priming cup device and a spark plug. Manufacturing, assembling and distribution will be handled in Detroit, with distributing branches in New York, Chicago, Los Angeles and Minneapolis.

CARS BRING \$40 UP AT BALTIMORE SALE

Protests of Dealers Fail to Check Sale—Large Allot- ments Taken

BALTIMORE, Feb. 25—Despite a protest by the Baltimore Automobile Trade Association to the Government, asking that the sale of used motor vehicles in large quantities be discontinued in Baltimore, officials of the Government sold last week 2100 motor cars of all kinds and in various conditions.

No touring cars were offered, the models being light delivery cars, trucks and ambulances. A crowd that ran into thousands was on hand.

Inspection of the cars by buyers was limited to a look under the hood and a moving of brakes and gears and any other exterior inspection possible. No cars were permitted to be tested as far as operation was concerned.

Government officials stated the cars were serviceable, but did not come up to the specifications demanded by the Government. All the machines that left Camp Holabird, the Government camp, a few miles from the city, were towed away.

The cars being sold here are used motor vehicles gathered from the various motor camps of the United States. They are being sold under the authority of the Quartermaster General's office and officials of the Motor Transport Corps directed the sale. Buyers came from all over the country. It is estimated that the first day's sales totaled \$200,000. The lowest price was \$40. On the second day some of the big trucks brought as high as \$2,400.

Interests said to represent the General Motors Corp. and the Backus Motor Co. of East Orange, N. J., are reported to have purchased about \$20,000 worth of cars each.

Ship Cars by Freight

Practically none of the cars leave the grounds under their own power. About 300 freight cars of the B. & O. and Pennsylvania Railroad now are parked just outside the grounds ready to receive the cars for out-of-town shipment.

Brigadier General A. E. Williams, assistant to the Quartermaster General, attended the sale and was accompanied by Colonel F. H. Pope, chief of the Motor Transport Corps, and Lieutenant Colonel W. N. Haskell, assistant director of sales.

John C. O'Brien, general manager of the Baltimore Automobile Trade Association, said the association's members protested to the Government because of the injustice of bringing machines from all over the country to be sold in this city. This, the dealers believe, would have a serious effect on future business here. They sought to have the Government sell the cars at the various Motor Transport Camps instead of bringing them to Baltimore.

A BILL has been introduced in the State of Washington Legislature under which automobiles would be taxed \$2 each to provide a fund for the preservation of the State's scenic beauty. Dealers express the hope that legislators may soon find another source of revenue for State needs.

KELLY TIRE REPORTED LARGEST YEAR'S PROFIT

NEW YORK, Feb. 26—Gross profits of \$7,721,901, the second largest in the history of the company, are shown in the annual report of the Kelly-Springfield Tire Co. for 1920. Net profits were \$3,430,914, also the second largest ever reported. The deductions in 1920 amounted to \$2,076,152, which included \$500,000 for fluctuations in inventory valuations as well as for losses on Liberty bonds and deduction of fixed and miscellaneous charges.

President Frederick A. Seaman stated that the company had no supplies or contracts for raw materials at former high prices and is in a position to take advantage of low levels for future requirements. The first nine months of 1920 showed marked improvement over the same period of 1919, but there was a marked falling off in business for the last quarter.

CHRYSLER TO DECIDE NEW MAXWELL MANAGER

NEW YORK, Feb. 26—When asked to-day whether or not he had been asked to accept the general management of the Maxwell-Chalmers combination, W. R. Wilson, who is one of the vice-presidents of the Irving National Bank of this city, referred inquiries to Walter P. Chrysler, chairman of the management committee which will make the appointment. He intimated the subject had been taken up with him, but added that he could not say whether the appointment would come to him. Chrysler has declined to make any statement.

Wilson, who is about 35 years old, is better known as a financier than as a production man, although he has had considerable experience in the automotive industry. He was associated with the Studebaker Corp. until the formation of the Dodge Bros. Motor Car Co. He assisted the Dodge Brothers in perfecting their organization and remained with them five years in a confidential capacity.

Wayne Dealers Fight Tax

RICHMOND, IND., Feb. 24—Full page notices to automobile owners are being run in newspapers here by the Wayne County Automotive Trade Association, of the proposed increase in motor vehicle fees, as suggested by Secretary of the Treasury Houston, and advising them, if they are opposed to increased taxation, to protest to their representatives in Congress.

SENATE WOULD LOWER SALE OF ARMY STOCK

Committee Recommends Transferal Where Needed —Provides for Aviation

WASHINGTON, Feb. 24—Recommendation of the War Department for the disposal of surplus automobile equipment placing a limitation upon the number of motor vehicles to be sold or transferred were adopted by the Senate committee on military affairs in reporting the army appropriation bill to the Senate to-day. The item, if passed without amendment, would to a large extent block efforts of Congressman Anthony of Kansas to dump army automobile equipment on the open market. The Senate bill specifies that the total transfers and sales during the first six months of the present calendar year must not aggregate in excess of 10,000 motor trucks and 2000 passenger carrying automobiles.

The House bill, which carried the Anthony provision, required the sale and not transfer of motor vehicles. Under the proposed legislation now before the Senate all points of law are met because under the existing law the War Department must give other Federal departments a choice of trucks. Incidentally this item in the Senate bill embraces the essential features of three bills introduced in the Senate since the House passed the Anthony amendment.

The Senate army bill, however, provides for the sale of 1000 automobiles more than the House bill. Brigadier General Connor, chief of transportation of the War Department, had recommended that only 300 passenger cars should be sold or transferred because all others were needed for the reserve. He stated that allowing for recent surplus declarations the army owned 4245 automobiles and that the authorized reduction for the army is 3800 passenger vehicles so that the Government will be short 500 cars when supplies are given the National Guard and reserve officers training car units. General Connor recommended that it would be better to transfer than sell because of the condition of the automobile trade at present.

Bulk Sold Before Bill Passes

Because of the fact that the army will have disposed of by sale or transfer 6700 trucks before the bill passes, the Senate amendment would fix the number to be disposed of at 3300. The Anthony bill would require the sale of 10,000 more. It is believed here that the revision as contemplated by the Senate committee will prevail in the conference with representatives of the House.

The army appropriation bill also contained a provision authorizing the expenditure of not less than \$5,000,000 for experiment and research work with airplanes and not less than \$7,000,000 for new airplanes, parts, accessories. This represents a marked increase over House appropriations.

INSURANCE FORBIDDEN FOR CONFISCATION

National Underwriters Conference Decides That Protection Is Not Warranted

NEW YORK, Feb. 26—"Confiscation insurance" is forbidden to all insurance companies belonging to the National Automobile Underwriters Conference by a recent decision of that body. As practically all the large stock insurance companies covering automobiles belong to the conference, this action means practically that it will not be possible to get insurance on an automobile against its being confiscated by the Federal Government for having been caught carrying liquor in violation of the Volstead law.

Insurance underwriters have in general been of the opinion that violators of the Volstead law were not entitled to insurance, and that practically all innocent victims of confiscation already insured against theft would be able to claim indemnity on the ground that the car was stolen. Perhaps the only protection which could be asked of insurance companies was against misuse of the car by a friend.

But the underwriters maintained that if this were to be covered, every enterprising bootlegger would frame his case to correspond, with the result that insurance companies would find themselves betting against a bootlegger's risk of capture.

A recent ruling of a Federal court provides that automobiles "held for trial" may be taken out on bail, that is, for deposit with the court of collateral security. If an owner feels that his car is not likely to be confiscated, that he has an open and shut case, he can, under this ruling, provide care of the car to prevent deterioration.

Newburgh Forms Association

NEWBURGH, N. Y., Feb. 26—The Automobile Dealers Association of Newburgh has been formed here with a membership of automobile dealers only. Leroy H. Crowley has been elected first president of the organization; Otto Deisseroth, vice-president; James E. Nugent, treasurer, and Malcolm E. Parrott, secretary.

Boost Michigan Association

SAGINAW, MICH., Feb. 24—Plans for the organization of Michigan Automobile dealers into a state association, were given impetus at a gathering here to-night attended by 204 dealers from Saginaw, Bay City and Flint. A banquet at the Elks Club was followed by a visit to the Saginaw Automobile show which opened to-night.

Guy O. Simons of the Simons Sales Co., Detroit, who is a director of the N. A. D. A. and Harry G. Moock, secretary-manager of the N. A. D. A. spoke at the banquet, at the conclusion of which it was voted unanimously by the

Saginaw dealers to affiliate the proposed new state association. The delegations from Bay City and Flint also expressed themselves as anxious to participate, and assured Secretary Moock that formal action to that end would be taken at meetings to be held in the two cities prior to the organization meeting which is to be held in Detroit in April.

FIRST KESSLER MODELS BOOKED FOR DETROIT

DETROIT, Feb. 28—More new makes of motor cars will be exhibited at the twentieth annual Detroit automobile show, scheduled for March 19 to 26, than have been shown at a Detroit exhibition for many years. The exhibition in the new Morgan & Wright Building will contain a dozen or more cars which have never been displayed in a Detroit show before, while of this number eight or nine are new products in the field during the past six or seven months.

Among the cars which are being shown are the Daniels, Handley-Knight, H-C-S, Kessler, Lafayette, Lincoln, Sheridan, Dixie-Flyer, Moon, Roamer and Gardner. While some of the makes are not new this season still they are newcomers on the Detroit market and their display at the Detroit show will make it just as complete and comprehensive as any in the country. The Kessler will be seen here for the first time, as it is a brand new Detroit product and the first models produced by the company will grace the exhibition floor next month.

NEW YORK CHANGES HEAVY TRUCK PLANS

ALBANY, N. Y., Feb. 26—Though the proposed plan of taxing heavy duty motor trucks from the highways of New York has been abandoned as impractical, the State legislature is proceeding with its plan to enact laws which will place the entire burden of road maintenance upon car owners. Under the tax schedule embodied in a bill introduced to-day fees are boosted from 50 to 100 per cent.

Included in the provisions of the measure are an increase in taxes of 25 to 40 cents per horse power. Trucks of more than three tons weight are assessed double. On a tonnage of from two to three the tax is increased from \$15 to \$23.50; three to four tons the increase is from \$20 to \$40. The ten-ton truck will pay \$110 and the tax on the 14-ton vehicle will be \$140. For every ton in excess of fourteen the tax will be \$20.

TRAFFIC Motor Sales Co., organized at Portland, Me., with a capital stock of \$100,000, will, in addition to conducting an automobile sales business, maintain and operate a chain of camps, boarding houses and hotels, along the main highways of the State. Wilbur H. Taylor of Allston, Mass., is president of the company.

SALES TAX OPPOSED BY U. S. CHAMBER

Referendum Shows Unanimous Sentiment for Excess Profits Tax Repeal

WASHINGTON, Feb. 25—Representatives of the automotive industry who have felt that there was little probability of Congress levying additional excise taxes and that there would be a widespread demand throughout the country for some form of sales tax as a substitute for levies which now are unpopular, will find cold comfort in the report of the committee on taxation of the Chamber of Commerce of the United States, recounting the results of a national referendum on fifteen proposals for changes in the present taxation system.

There was an almost unanimous demand among the members of the chamber for a repeal of the excess profits tax, but **THERE WAS A MAJORITY VOTE AGAINST ANY FORM OF SALES TAX SUGGESTED BOTH AS A SUBSTITUTE FOR AND IN ADDITION TO OTHER FORMS OF TAX.** The proposal that excise taxes should be levied upon some articles of wide use but not of first necessity, partly to take the place of the excess profits tax, was carried by more than a two-thirds vote. The ballot on this question stood—for, 1217; against, 504.

On the question, "Should a sales tax be levied instead of the excise or excess profits tax?" the vote was—for, 704; against, 855. Those who favored a retail sales tax and those who favored a general turnover tax were about evenly divided.

The National Automobile Chamber of Commerce is the only organization connected with the industry which has gone on record formally in favor of a sales tax, although the Motor and Accessory Manufacturers Association and the Rubber Association of America are in favor of a sales tax, though not on retail sales as proposed by the N. A. C. C. The proposal of Secretary of the Treasury Houston that the excise tax on passenger automobiles be doubled, is strongly favored by many of the Congressional leaders, and members of the United States Chamber of Commerce who voted in favor of such action did so with the understanding that excise taxes levied should be supplemental to those now in effect.

Congress Against Sales Tax

There is a strong sentiment in Congress against any form of sales tax. The professed belief among Senators and Representatives is that if a 1 per cent tax on sales were authorized, many unscrupulous dealers would use it as a means of bringing in additional profit.

Advocates of the sales tax contend, on the other hand, that consumers would suffer less from the sales tax than they would from any other form of levy.

GOOD SPRING MONTHS PREDICTED IN OHIO

Columbus Dealers Report Indications of General Loosening of Purse Strings

COLUMBUS, Feb. 28—A distinctly better tone has developed in all branches of the automotive industry in Columbus and central Ohio territory. This has been noted since late in January and the tendency to optimism has increased as the spring season approaches. Dealers and distributors are united in saying that business is getting better in every respect and this improvement is expected to continue.

The Columbus automobile show, which was held rather early this year was largely responsible for the awakening of interest in cars.

One of the features of the demand in Columbus is the desire for enclosed cars. This has been gaining momentum for some time and the nearer arrival of spring has not diminished it as it has done in previous seasons.

The rural districts are showing some signs of coming into the market but this is not expected to be very strong. Farmers have been hard hit by the reduced prices for their products and consequently have not been in the market for motor cars to any great extent. But this is passing away and the dealers who sell to farmers report a much better outlook since Feb. 1. City business is gaining rapidly and things are squaring around for a rather good business in March and April. That is the belief of a vast majority of dealers and distributors.

GUY A. WILLEY OPENS NEW HOME OF PAIGE

PHILADELPHIA, Feb. 26—The new home of Paige, the 10-story Willey building erected at the corner of Broad and Vine Streets by the Guy A. Willey Motor Co. was formally opened to-day with more than 100 members of the Quaker City trade guests at luncheon of the Willey company. The guests inspected the big salesroom, 67 by 90 ft., and the offices, looked through an imposing exposition of automotive equipment staged with the co-operation of a number of Philadelphia accessory dealers and witnessed moving pictures of Paige car performances on the beach at Daytona and in the climb of Pike's Peak.

Throughout next week the building will be open to the public and 7500 invitations have been issued. In addition to the accessory show, staged in the used car salesroom in the basement, a feature of the public entertainment will be the motion picture, "Elements of the Automobile," recently filmed by the Bray Studios.

The Willey building will house only the executive and sales departments of the Willey company. Service will be handled in another new building, six stories high, now nearing completion a

few blocks away. The Willey company will occupy only the main floor, mezzanine and basement of the Broad Street building, having leased the nine upper floors for a long period of years. This gives a Broad Street frontage for sales in the heart of the automobile section with comparatively small overhead, while service is housed conveniently near yet away from the high rentals of a main business thoroughfare.

The Willey company utilized the formal opening not only to get a wealth of newspaper publicity but also to obtain prospects, whose names were listed by means of a contest held in connection with the accessory show.

The Willey company has distributed the Paige in the Philadelphia territory for several years and its executives, Guy A. Willey, president, and A. E. Maltby, vice-president and general manager, are veterans in the automobile business.

PATERSON SHOW HELPS BUSINESS REVIVAL

PATERSON, Feb. 25—Evidence of considerable spring sales stimulation was found at the Fifth Annual Automobile Show in the Sixth Regiment Armory here this week. Although the attendance, after the first night, was lower than at some of Paterson's previous shows, the percentage of prospects was better.

Sales on the floor were satisfactory and the exhibitors, on the whole, were encouraged by the sincerity of the inquiries which are expected to develop into a strong spring demand when weather conditions become more settled.

Paterson is coming back after a decided business slump. It received the brunt of the blow when the silk market crashed several months ago. Conditions to-day are much brighter.

Otto E. Scherer Dies

PALMYRA, WIS., Feb. 24—Otto E. Scherer, member of the firm of Otto E. Scherer & Son, Inc., distributor of Buick motor cars for southern Wisconsin and at the time of his death the oldest active Buick dealer in the state, died at his home here Sunday as the result of a general breakdown.

Mr. Scherer was born in Watertown forty-nine years ago and was appointed Buick distributor in 1905. The success of his career was notable. From a small beginning his business grew until in 1910 it amounted to \$196,000. The past year is the only one exceeding it in volume.

For two terms he had served as mayor of Palmyra and had held other offices of trust in the affairs of the community.

Oppose Cost Price Bill

NEW YORK, Feb. 26—The Rubber Association of America has urged its members to oppose vigorously a bill introduced in the Minneapolis Legislature, which would require the marking of merchandise with the manufacturer's cost, price at which it was sold to him, name and address of its distributor, and the retail price of the article.

HARTFORD REUNITED IN SUCCESSFUL SHOW

Differences of Year Ago Smoothed Out by Co-operation—Car Sales Lead

HARTFORD, CONN., Feb. 26.—Successful from every angle was the fourteenth annual motor show of the Hartford Automobile Dealers Association. All previous records were bettered, according to Russell P. Taber, chairman of the show committee.

The 1921 show was a buying show and most of the dealers were able to account for some very good business. The accessory folks too did very well. Trucks did not fare so well and it is not recorded that the two makes of tractors displayed set any new records. One buyer journeyed 35 miles to purchase a sedan, but one instance by the way. All dealers report plenty of prospects.

One fact brought home forcibly to the dealers was the truth of the old saying that "In union there is strength." A year back some twenty-five Hartford dealers were barred from the old time organization's show because they had not been in business two years, which ruling practically forced these dealers to conduct their own show. Now then, all these dealers are members of the old guard and there will be but one show this season. Furthermore the increased membership of the Hartford Automobile Dealers Association made it possible to stage a larger and better show than ever. And the public, desiring to see as many cars as possible under one roof, certainly got its money's worth. Contrasted with the situation a year back conditions to-day are most encouraging.

Back of it all is an underlying spirit of cooperation and this was expressed forcibly at two luncheons given during show week, the largest gatherings of dealers, so factory representatives said, of anything seen between New York and Chicago, gatherings by the way that reflected confidence to the fullest extent.

During the week there were many sales conferences and dinners, one of the largest of which was the Reo function at the Hartford club when R. C. Rueschaw, sales manager of the Reo company presented a lengthy motion picture film. Dealers were present from Connecticut, New York and Massachusetts.

Belleville Stages Show

BELLEVILLE, ILL., Mar. 2—The first automobile show of the Belleville Automobile Dealers Association will open to-morrow in the showrooms of the Modern Automobile & Garage Co.

As a feature of the opening day of the show a luncheon will be tendered by dealers to their sales staffs, fellow business men and bankers. Speakers scheduled are F. A. Vesper of the Vesper Buick Co., St. Louis; Robert E. Lee, secretary manager of the St. Louis association; Roy Rauschkolb, of Firestone, and E. A. Daley of the Belleville Board of Trade.

Changes in the Trade

C. J. Heign will be manager of the new Dodge sales branch opened at Howe, Ind.

Maury Motor Corp., Columbia, Tenn., Cary Fry, manager, will distribute the Cadillac there.

J. N. Kellerman has been named retail sales manager of the Hudson-Frampton organization, St. Louis.

F. G. Adams has been named service manager of the Simmons Motor Car Co., Cleveland distributor of the Chandler car.

E. A. Davenport has been placed in charge of a zone distributing agency of the Elgin Motor Car Corp. in Fort Worth, Texas.

Kelfer & Steele Motor Co., Easton, Pa., has been appointed direct dealer of Haynes cars in eastern Pennsylvania and western New Jersey.

Bob Crowthers has left the Gary Motor Truck Co. to join the Master Trucks, Inc., Chicago, as advertising manager and assistant sales manager.

B. F. Goodrich Rubber Co. has removed its Philadelphia branch from Broad and Spring Garden streets to its new building at 1248 North Broad Street.

F. A. Winship, sales manager at the New York office of the Armstrong Rubber Co., Inc., has taken over the management of the new factory branch at Chicago.

Frank B. Willis has been appointed sales manager of the Duplex Truck Co., Lansing, Mich. He was formerly sales manager for the Kelly-Springfield Truck Co.

Reed Supply Co., Oklahoma City, Okla., has changed its corporate name to the Southern Motor Supply Co. The business will be continued along the same lines as formerly.

Marvel Carburetor Sales Co. has opened in Denver, where it will distribute Marvel carburetors and Splidorf piston rings in Colorado, Wyoming, New Mexico and northwest Texas.

Mitchell Mackie, sales manager Waukesha Motor Co., Waukesha, Wis., who has been with that concern since 1915, has resigned, effective March 1. Mackie has not announced his plans.

Hawisher Motor Co., Lima, Ohio, will incorporate for \$50,000 to distribute Studebaker cars. The incorporators include H. A. Hawisher, E. H. Hawisher, O. W. Miller and C. J. Landsair.

John Zak Motor Co., of Sacramento, Cal., has taken over the Nash agency there, replacing the Liberty, which was taken by the L. D. Allen Co. The Zak company also handles the National.

Hatch Motors Co., Philadelphia, handling Marmon cars for the territory, has opened a branch in Bethlehem, Pa., under the direction of F. L. Berger, former service manager in Philadelphia.

Connell & McKone Co., Boston, has taken over the distribution of the Handley-Knight car. With this newcomer the Connell & McKone Co. now has a sleeve-valve motor for every required size of car.

Salysers-Walters Motor Co., Sioux City, Iowa, has been appointed distributors for Mitchell in northeastern Nebraska, northwestern Iowa, and a portion of the southeastern part of South Dakota.

B. C. Pollock, for twelve years with the Buick organization, has been appointed sales manager of the Buick Motor Car Co. of Philadelphia and L. J. Hurd has been promoted to the office of assistant manager.

McFarlan-Pittsburgh Co., representing the McFarlan car, has opened a branch in Philadelphia. B. A. Wilkoff is general manager of the branch. Temporarily the service and parts department will be maintained at the same address.

Sealtite Distributing Co., Philadelphia, has been appointed distributor of the Hanson in Pennsylvania, southern New Jersey, Delaware and Maryland. G. H. Wagner is sales manager. N. R. Mounts is president and R. G. Jolly is secretary and treasurer.

C. R. Miller has resigned as general manager of the Allen Motor Co. after having served in that capacity since the removal of the company from Fostoria to Columbus. Previous to that time he was works manager of the Willys-Overland.

J. C. Harvey, Haynes distributor at Worcester, Mass., has now become distributor for Haynes with enlarged territory and with added headquarters at 218 Elliot street, Boston. Harvey will continue his salesrooms and service station at Worcester.

George M. Parsons Motor Sales Co. has been formed to handle the Stutz agency in Spokane territory. Main headquarters are in Spokane and selling agencies and service stations are to be established at Walla Walla, Dayton, Colfax and other points.

Jackson & Bauer, Rockford, Ill., have leased showrooms in the Standard Motor Corp. building to display Hare's Motors products. The company has taken over the northern Illinois agency outside of Cook county for Hare's Motors products.

Ohio Hart-Parr Co., with headquarters in Columbus, has been formed to distribute Hart-Parr tractors in Ohio. The company is composed of T. W. Van Doran and H. T. Fravel, both of whom have had wide experience as distributors of automobiles.

Ralph Potter, formerly manager of the Potter-Lalley Electric Co., Des Moines, has resigned, to become manager of the wholesale department of the O'Dea-Graben Motor Co. of the same city. He will be in charge of outside sales of the Maxwell and Roamer.

Lynch & Lynch, Monroe, Wis., has taken over the distribution of the Delco Lite in Green county and vicinity. Stabel & Evans, formerly in charge, dissolved partnership, due to the illness of A. O. Stabel. Evans joins Lynch & Lynch as sales manager of the Delco department.

Frank Irvin, nearly ten years with the Des Moines Goodyear branch, has purchased a partnership in the Spry & McArthur Co., Des Moines, battery experts and distributors of the Milburn Electric. He joins the firm as secretary, having been manager of inside sales, office head and credit manager when he was with the Goodyear branch.

Reese F. Mahan is in charge of the branch of the Hatch Motors Co., Philadelphia, just opened in Ardmore, Pa. He has completed a large showroom in which to sell Marmon and Hupmobile cars. His territory includes Radnor, Bryn Mawr, Narberth and Merion, in addition to Ardmore. He will have an up-to-the-minute service station.

C. A. Tanner, who for four years has been manager of the Baltimore branch of the B. F. Goodrich Rubber Co., has been transferred to the management of the St. Louis branch. C. L. Kelsey, formerly district manager of the B. F. Goodrich Rubber Co. in Cincinnati, has been appointed to the management of the Baltimore branch.

George C. Harr and A. L. McMillan have been added to the sales force of the Neel-Cadillac Co., Philadelphia. Harr was formerly sales manager for Herbert Bros., and McMillan has been manager of the Neel specification department. W. P. Smith, formerly in charge of the new car department, succeeds McMillan as specification chief.

LaCrosse (Wis.) Automotive Service Co. has been organized by L. J. Stellpflug and F. W. Humrich to specialize in passenger car, truck and tractor service from the electrical angle. Humrich is a graduate of Ohio State with degrees of mechanical and electrical engineer and formerly was associated with Duesenberg in engine development work.

Emery Heads Garage Owners

CHICAGO, Feb. 24—One hundred and seventy-five members of the Chicago Garage Owners Association and their guests attended the annual meeting and dinner of the organization at the Hotel La Salle here recently. J. R. Emery of the Union Club Motor Livery was elected president. Other officers chosen were as follows: First vice-president, representing the electric division of the association, Fred Daniels of the Terminal Garage; second vice-president, the gasoline division, H. D. Jackson, Interstate Garage; third vice-president, motor livery division, E. H. Llewellyn, La Salle Garage; treasurer, H. E. Halbert, Garfield Park Garage. Mrs. G. H. Steineck is secretary of the association.

Truck Officials Change

NEW YORK, Feb. 24—The Enterprise Motor Corp., handling the Kelly-Springfield truck, one of Hare's Motors products, has undergone some changes in management. E. Hunn, Jr., up to the present time assistant to President E. H. Hare, has been made general manager of the Enterprise firm, which includes a sales and service station in New York and a branch in Brooklyn. The general sales manager is George S. Hauck, and E. H. Dorman retains his post as service manager.

Gibbes to Discuss Highways

COLUMBIA, S. C., Feb. 25—Plans for another good roads school to be held at the University of South Carolina, March 15 and 16, are rapidly being completed by the engineering department of the university and by officials of the State Highway Department. The first good roads institute at the university was held last year and was a decided success. Among the speakers for this year are A. Mason Gibbes, president of the South Carolina Automotive Trades Association.

Wood New York President

NEW YORK, Feb. 25—Walter A. Wood has been elected president of the Automobile Dealers Association, Inc., of New York. W. O. Crabtree was elected vice-president; Harry Stratton, second vice-president, and Albert Hirst, secretary-treasurer.

COMING EVENTS

SHOWS

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|------------------------|------------------|--|
| Atlantic City..... | March 5-12..... | Annual Automobile Show,
Automobile Trades Ass'n
of Atlantic City, Million
Dollar Pier, A. H. Gene-
rostzky, Mgr. |
| Brooklyn | March 5-12..... | Annual Automobile Show,
Brooklyn Motor Vehicle
Dealers' Ass'n, 23rd Regi-
ment Armory, George C.
Lewis, Chmn. |
| New Haven, Conn..... | March 5-12..... | Annual Automobile Show,
New Haven Automotive
Dealers' Ass'n, Arena. |
| Atlanta | March 5-12..... | Annual Automobile Show,
Atlanta Automobile Ass'n,
Auditorium, Virgil Shepard,
Mgr. |
| Pittsburgh | March 5-12..... | Annual Automobile Show,
Automotive Ass'n, Inc.,
Motor Square Garden, J. J.
Bell, Mgr. |
| Bristol, Conn..... | March 7-8..... | Annual Automobile Show,
Red Men's Auditorium. |
| Syracuse, N. Y..... | March 7-12..... | Annual Automobile Show,
Syracuse Automobile Deal-
ers' Ass'n, Armory, H. H.
Smith, Mgr. |
| Springfield, Mass..... | March 7-12..... | Annual Automobile Show,
Springfield Automotiv-
e Ass'n, Auditorium,
Harry W. Stacy, Mgr. |
| Indianapolis | March 7-12..... | Annual Automobile Show,
Indianapolis Automotive
Trade Ass'n, State Fair
Grounds, John Orman, Mgr. |
| Nashville, Tenn..... | March 7-12..... | Annual Automobile Show,
Nashville Automobile Trade
Ass'n, Page Building. |
| Wheeling, W. Va..... | March 10-11..... | Annual Automobile Show,
Wheeling Automobile Deal-
ers' Ass'n, Auditorium, G.
M. Ford, Mgr. |
| Pendleton, Ore..... | March 10-12..... | Annual Automobile Show,
Pendleton Automobile
Ass'n, Happy Carmon, J.
B. Knight, Mgr. |
| Fort Wayne, Ind..... | March 10-16..... | Annual Automobile Show,
Concordia College. |
| Antigo, Wis..... | March 11-13..... | Annual Automobile Show,
Langlade County Automot-
obile Dealers' Association,
Armory. |
| Newark, N. J..... | March 12-19..... | Annual Automobile Show,
New Jersey Automobile Ex-
hibition Co., Armory. |
| Boston | March 12-19..... | Annual Automobile Show,
Boston Automobile Dealers'
Ass'n, Mechanic Bldg. and
South Armory. |
| Richmond, Va..... | March 12-19..... | Annual Automobile Show,
Richmond Automotive
Trade Ass'n, Gray's Arm-
ory, J. A. Kline, Mgr. |
| Scranton, Pa..... | March 14-17..... | Truck and Tractor Show,
Scranton Motor Trades
Ass'n, Armory, H. B. An-
drews, Mgr. |
| Omaha, Neb..... | March 14-19..... | Annual Automobile Show,
Omaha Automobile Trade
Ass'n, Omaha Auditorium,
C. G. Powell, Mgr. |
| Washington | March 14-19..... | Annual Automobile Show,
Washington Automotive
Trade Ass'n, Convention
Hall, Rudolph Jose, Chmn. |

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| Hallifax, N. S..... | March 14-19..... | Easton Canada's Patriotic Motor Show, Armouries. |
| Wilkes-Barre, Pa..... | March 14-19..... | Passenger Car Show. |
| | March 21-26.... | Truck Show, Automobile Dealers' Ass'n of Wilkes-Barre, Inc. |
| Great Falls, Mont..... | March 15-19.... | Annual Automobile Show, Montana Distributors Ass'n, Hotel Rainbow, A. J. Breitenstein, Mgr. |
| Greenville, S. C..... | March 16-19.... | Annual Automobile Show, Greenville Dealers' Ass'n, Textile Hall. |
| Uniontown, Pa..... | March 16-19.... | Annual Automobile Show, Uniontown Automotive Dealers' Ass'n, Motor Square Garage. |
| Detroit | March 19-26.... | Annual Automobile Show, Detroit Automobile Dealers' Ass'n, Morgan-Wright Building. |
| Torrington, Conn..... | March 20-26.... | Annual Automobile Show, Armory, J. J. Callahan, Mgr. |
| Deadwood, S. D..... | March 21-26.... | Annual Automobile Show, Deadwood Business Men's Ass'n, Auditorium. |
| Cedar Rapids, Iowa.... | March 21-26.... | Annual Automobile Show, Linn County Motor Trades Bureau, Auditorium, E. L. McKibben. |
| Fort Worth, Texas..... | March 21-26.... | Annual Automobile Show, Fort Worth Automobile Trade Ass'n, First Baptist Church Auditorium, A. T. Lowry, Mgr. |
| Norfolk, Va..... | March 21-26.... | Annual Automobile Show, Norfolk Automobile Dealers', Monticello Hotel, J. W. Gates, director. |
| Ottumwa, Iowa..... | March 23-26.... | Annual Automobile Show, Wapello County Motor Trades Bureau, Davis Bldg., F. T. Lynch, Mgr. |
| Columbia, S. C..... | Mar. 28-Apr. 2.. | Annual Automobile Show, Columbia Automotive Trade Ass'n, State Fair Bldg., J. M. Green, Mgr. |
| Greenfield, Mass..... | Mar. 28-Apr. 2.. | Annual Automobile Show, Greenfield Automobile dealers' Ass'n, G. T. D. Factory, G. E. Graham, Mgr. |
| Bridgeton, N. J..... | April 2-9..... | Annual Automobile Show, Bridgeton Automotive Ass'n. |
| Denver | April 3-9..... | Annual Automobile Show, Auditorium. |
| Gloversville, N. Y..... | April 4-9..... | Annual Automobile Show, Armory, J. J. Callahan, Mgr. |
| Seattle | April 4-9..... | Annual Automobile Show, Motor Car Dealers' Ass'n, Arena-Hippodrome, W. J. Coyle, Mgr. |
| Charlotte, N. C..... | April 11-16.... | Annual Automobile Show, Charlotte Automotive Trade Ass'n, W. M. Jones, Sec'y. |
| Goldshoro, N. C..... | April 20-23.... | Automobile and Industrial Exhibit, Goldsboro Automotive Trade Ass'n, W. C. Denmark, Mgr. |

RACES

- Uniontown, Pa..... June 18..... Speedway Events.
Uniontown, Pa..... Labor Day..... Autumn Classic.

ABBREVIATIONS: G—Gasoline. K—Kerosene. D—Distillate. Plow capacity varies in relation to operating conditions. Figures are based on 14-in. plows. LeR—LeRoi. Clim—Climax. Beav.—Beaver. Dom.—Doman. Cont.—Continental. Wauk.—Waukegan, Wisc.—Wisconsin. T.C.—Twin City. Vur.—Vura. Evin.—Evinrude. Midw.—Midwest. Com.—Commercial Tractor. *—Crawler type. All others are wheel type.

Specifications of Current Models of Passenger Cars

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy.	6-3 1/4 x 5	123	32 x 4	\$2260	\$2260	.....	.....	.....
Allen.....Series 43	Ow.	4-3 1/2 x 5	110	32 x 4	1595	1595	.....	\$2395	.....
Ambassador.....R	Cont.	12-2 1/2 x 5	136	32 x 4 1/2	.....	.....	.....	.....	.....
American.....C	H-S.	6-3 1/4 x 5	127	32 x 4	2395	2395	\$2475	\$3295	3495
Anderson.....Series 40	Cont.	6-3 1/4 x 4 1/2	120	32 x 4	2195	2145	2195	3200	3200
Apperson.....821-S	Ow.	8-3 1/4 x 5	130	34 x 4 1/2	.....	13500	3500	4500	4500
Apperson Anniversary	Ow.	8-3 1/4 x 5	130	34 x 4 1/2	.....	4250	4250	6000	6000
Auburn.....639 H-K	Cont.	6-3 1/4 x 4 1/2	120	32 x 4	1745	1695	.....	2795	2795
Beggs.....20T	Cont.	6-3 1/4 x 4 1/2	120	33 x 4	1885	1885	.....	.....	2885
Bour-Davis.....21S	Cont.	6-3 1/2 x 5 1/4	126	33 x 4 1/2	12585	.....	2585	.....	.....
Bradley.....Four	Ow.	4-4 x 5 1/2	125	32 x 4 1/2	17900	9000	.....	10500	.....
Brewster.....91	Ow.	4-3 1/2 x 5	109	31 x 4	1285	1285	.....	1885	.....
Buscoe.....4-34	Ow.	4-3 1/2 x 5	118	33 x 4 1/2	1795	1795	2585	2895	.....
Buscoe.....21-44-5-6-7	Ow.	6-3 1/2 x 4 1/2	124	24 x 4 1/2	.....	.....	2065	2985	3295
Buscoe.....21-48-9-50	Ow.	6-3 1/2 x 4 1/2	124	24 x 4 1/2	.....	.....	.....	.....	.....
Cadillac.....59	Ow.	8-3 1/2 x 5 1/4	132	34 x 4 1/2	3790	3790	.....	4950	.....
Case.....V	Cont.	6-3 1/2 x 5 1/4	126	34 x 4 1/2	.....	12650	2650	3400	3750
Chalmers.....6-30	Ow.	6-3 1/2 x 4 1/2	117	32 x 4	1795	1755	.....	2595	2745
Chalmers.....6-30	Ow.	6-3 1/2 x 4 1/2	122	33 x 4 1/2	.....	.....	1945	.....	.....
Champion.....Tourist	Lyc.	4-3 1/2 x 5	113	32 x 3 1/2	.....	1250	.....	.....	.....
Champion.....Special	H-S.	4-3 1/2 x 5	118	32 x 4	1595	1595	.....	.....	.....
Chandler.....490	Ow.	6-3 1/2 x 5	123	33 x 4	1895	1895	2895	2995	.....
Chevrolet.....FB	Ow.	4-3 1/2 x 4	102	30 x 3 1/2	795	820	1325	1375	.....
Chevrolet.....40	Ow.	4-3 1/2 x 4	110	33 x 4	1320	1345	2075	2075	.....
Cleveland.....40	Ow.	6-3 x 4 1/2	112	32 x 4	1435	1435	2345	2445	.....
Climber Six.....S	H-S.	6-3 1/2 x 5	125 1/2	32 x 4 1/2	2750	2750	.....	.....	.....
Cole.....870	Nort.	8-3 1/2 x 4 1/2	127	33 x 5	3250	3250	4250	4450	.....
Columbia.....D-C&S	Cont.	6-3 1/2 x 4 1/2	115	32 x 4	1945	1795	2895	2895	.....
Comet.....C-53	Cont.	6-3 1/2 x 4 1/2	125	33 x 4 1/2	.....	2350	.....	.....	.....
Commonwealth.....44	H-S.	4-3 1/2 x 5	117	32 x 4	.....	1595	.....	2465	.....
Crawford.....21-6-40	Cont.	6-3 1/2 x 5 1/4	122 1/2	32 x 4	3000	3000	.....	4500	.....
Crow-Elkhart.....L53-55	Lyc.	4-3 1/2 x 5	117	32 x 3 1/2	1295	1295	.....	2195	.....
Crow-Elkhart.....H53-55	H-S.	6-3 1/2 x 5	117	33 x 4	1545	1545	2395	.....	.....
Cunningham.....V-4	Ow.	8-3 1/2 x 5	132	35 x 5	6200	6200	7600	7600	.....
Daniels.....D-19	Ow.	8-3 1/2 x 5 1/4	132	34 x 4 1/2	15350	15350	6250	6950	.....
Davis.....51-57	Cont.	6-3 1/2 x 4 1/2	120	33 x 4	12125	2085	21250	3085	3085
Dixie Flyer.....H-S-70	H-S.	4-3 1/2 x 5	112	32 x 4	1595	1595	2570	2570	.....
Dodge Brothers.....6-80	Ow.	4-3 1/2 x 4 1/2	114	32 x 3 1/2	1285	1285	1900	2150	.....
Dorris.....17-A	D-Ly.	4-3 1/2 x 5	108	31 x 4	1215	1215	1865	1995	.....
Dort.....17-A	D-Ly.	4-3 1/2 x 5	108	31 x 4	1215	1215	1865	1995	.....
Dupont.....A	Ow.	4-3 1/2 x 5 1/2	124	32 x 4 1/2	3400	3400	.....	4900	.....
Elcar.....7-R	Cont.	6-3 1/2 x 4 1/2	117	33 x 4	1795	1795	1795	2500	2600
Elgin.....K	Falls.	6-3 1/2 x 4 1/2	118	33 x 4	1795	1775	2685	2685	.....
Essex.....A	Ow.	4-3 1/2 x 5	118	32 x 4	1595	1595	2100	2450	.....
Ferris.....Cont.	Cont.	6-3 1/2 x 5 1/4	130	32 x 4 1/2	3350	.....	*3350	.....	4875
Ford.....T	Ow.	4-3 1/2 x 4	100	30 x 3 1/2	395	440	745	795	.....
Franklin.....9-B	Ow.	6-3 1/2 x 4	115	32 x 4	2500	2700	2600	3700	.....
Friend.....Four	Ow.	4-3 1/2 x 4 1/2	112	32 x 3 1/2	1585	1585	2485	2585	.....
Globe.....B-10	Supre.	4-3 1/2 x 5	115	32 x 4	.....	.....	.....	.....	.....
Grant.....HX	Ow.	6-3 1/2 x 4 1/2	116	32 x 4	1550	1550	2450	2450	.....
Gardner.....G	Lyc.	4-3 1/2 x 5	112	32 x 3 1/2	1195	1195	.....	2145	.....
Halladay.....21	Rut.	6-3 1/2 x 5	116	33 x 4	.....	2285	.....	.....	.....
Handley-Knight.....Kn't	Cont.	4-4 1/2 x 4 1/2	125	32 x 4 1/2	.....	2985	.....	.....	.....
Hanson Six.....60	Cont.	6-3 1/2 x 4 1/2	121	32 x 4	2365	2365	2465	.....	3165
Hatfield.....A-42	Ow.	4-3 1/2 x 5	115	32 x 4	1695	1695	.....	2595	.....
Haynes.....47	Cont.	6-3 1/2 x 5	132	34 x 4 1/2	3500	.....	.....	4250	.....
Huffman.....R	Cont.	6-3 1/2 x 4 1/2	120	32 x 4	1995	1995	.....	2975	.....
H.C.S.....Series 3	Weid.	4-3 1/2 x 5 1/2	120	32 x 4 1/2	2925	2975	.....	.....	.....
Holmes.....O	Ow.	6-3 1/2 x 4 1/2	126	34 x 4 1/2	3350	.....	3350	4250	4550
Hudson Super 6.....O	Ow.	6-3 1/2 x 5	126	34 x 4 1/2	2400	.....	2400	3275	3400
Hupmobile.....Series R	Ow.	4-3 1/2 x 5 1/2	112	32 x 4	1685	1685	2725	2800	.....
Jackson.....638	Cont.	6-3 1/2 x 4 1/2	121	32 x 4 1/2	2685	1950	.....	3760	3760
Jordan.....M	Cont.	6-3 1/2 x 4 1/2	120	32 x 4	2650	2650	.....	3700	3700
Kenworthy.....8-90	Ow.	8-3 x 5 1/4	130	32 x 4 1/2	.....	.....	.....	.....	.....
King.....H	Ow.	8-3 x 5	120	32 x 4 1/2	2740	2725	*2745	.....	4035
Kissel.....45	Ow.	6-3 1/2 x 5 1/2	124	32 x 4 1/2	3475	3475	4275	4275	.....
Kline Kar.....6-55-K	Cont.	6-3 1/2 x 4 1/2	121	33 x 4	2290	2290	2290	3250	3200
LaFayette.....134	Ow.	8-3 1/2 x 5 1/4	132	33 x 5	5625	5625	7200	7400	.....
Leach.....21-A-B&C	Cont.	6-3 1/2 x 5 1/4	128	32 x 4 1/2	5700	5200	5700	.....	.....
Lexington.....Series S	Cont.	6-3 1/2 x 4 1/2	122	32 x 4	2285	2285	3250	2785	.....
Lexington.....Series T	Anst.	6-3 1/2 x 4 1/2	128	32 x 4 1/2	.....	2985	4150	4250	.....
Liberty.....1-C	Ow.	6-3 1/2 x 5	117	32 x 4	1795	1795	1885	2825	2850
Lincoln.....Ow.	Ow.	8-3 1/2 x 5	130	33 x 5	4600	4600	5750	6000	.....
Locomobile.....43-2-S-7	Ow.	6-4 1/2 x 5 1/2	142	35 x 5	.....	17650	7550	.....	11300
Lone Star.....Lyc.	4.	.....	.....	.....	.....	.....	.....	.....	.....
Lorraine.....21-T	H-S.	4-3 1/2 x 5	114	32 x 4	1665	1665	.....	2590	2590
Maibohm.....B	Ow.	6-3 1/2 x 4 1/2	116	32 x 4	1575	1575	.....	2395	2395
Marmon.....34	Ow.	6-3 1/2 x 5 1/4	136	32 x 4 1/2	5000	.....	5000	6150	6600
Maxwell.....25	Ow.	4-3 1/2 x 4 1/2	109	30 x 3 1/2	995	995	.....	1595	1695
McFarlan.....1921	Ow.	6-4 1/2 x 6	140	33 x 5	6300	6300	7500	7500	.....
Mercer.....Series 5	Ow.	4-3 1/2 x 6 1/2	132	32 x 4 1/2	3950	3950	5150	5650	.....
Merit.....B	Walk.	6-3 1/2 x 4 1/2	119	32 x 4	2245	2245	.....	.....	.....
Meteor.....R&RR	Dues.	4-4 1/2 x 6	129	32 x 4 1/2	5500	5500	.....	.....	.....
Metz.....M6	Rut.	6-3 1/2 x 5	120	32 x 4	1995	1995	.....	2795	2895
Mitchell.....F-40	Ow.	6-3 1/2 x 5	120	33 x 4	1750	1750	.....	2800	2900
Moon.....6-48	Cont.	6-3 1/2 x 4 1/2	122	32 x 4	2085	1985	.....	2955	2985
Murray.....Ow.	Ow.	8-3 1/2 x 5	128	34 x 4 1/2	.....	3500	.....	.....	.....
Nash.....681-6	Ow.	6-3 1/2 x 5	121	33 x 4	1695	1695	1850	2650	2895
Nash.....682	Ow.	6-3 1/2 x 5	127	34 x 4 1/2	.....	1875	.....	2895	.....
Nash Four.....Ow.	Ow.	4-3 1/2 x 5	112	32 x 3 1/2	1395	1395	.....	1985	2185
National Sextet.....BB	Ow.	6-3 1/2 x 5 1/4	130	32 x 4	3750	3750	4900	4950	.....
Nelson.....D	Ow.	4-3 1/2 x 4 1/2	104	32 x 4	.....	1700	.....	.....	.....
Noma.....1C	Cont.	6-3 1/2 x 4 1/2	128	32 x 4 1/2	3000	3200	.....	4450	.....
Norwalk.....430-KS	Lyc.	4-3 1/2 x 5	116	32 x 3 1/2	.....	1285	.....	.....	.....
Oakland.....34-C	Ow.	6-2 1/2 x 4 1/2	115	32 x 4	1395	1395	.....	2065	2065
Ogren.....6-60	Ow.	6-3 1/2 x 5 1/4	134	.....	3750	*3900	4750	5200	.....
Oldsmobile.....43-A	Ow.	4-3 1/2 x 5 1/4	115	32 x 4	1445	1445	2145	2145	.....
Overland.....4	Ow.	4-3 1/2 x 4	100	30 x 3 1/2	895	895	1425	1475	.....
Packard.....Six	Ow.	6-3 1/2 x 4 1/2	116	33 x 4 1/2	2975	2975	4150	4250	.....
Packard.....Twin Six	Ow.	12-3 x 5	136	35 x 5	6000	6000	8200	8450	.....
Paige.....6-42	Ow.	6-3 1/2 x 5	119	32 x 4	1770	1700	2525	2645	.....
Paige.....6-66	Cont.	6-3 1/2 x 5	131	33 x 4 1/2	2895	.....	2795	3675	.....
Pan American.....A	Ow.	4-3 1/2 x 5	108	33 x 4	.....	1500	.....	.....	.....
Pan American.....E-6-55	H-S.	6-3 1/2 x 4 1/2	121	33 x 4	2450	2450	.....	8000	.....
Parenti.....1921	Ow.	8-2 1/2 x 4 1/2	123	32 x 4	.....	2000	.....	3000	.....
Paterson.....650	Cont.	6-3 1/2 x 4 1/2	120	33 x 4	.....	1895	1925	2800	2800
Peerless.....56-S-7	Ow.	8-3 1/2 x 5	125	34 x 4 1/2	.....	3200	3200	4140	.....
Piedmont.....4-30	Lyc.	4-3 1/2 x 5	116	32 x 3 1/2	.....	1485	.....	.....	.....
Piedmont.....6-40	Cont.	6-3 1/2 x 4 1/2	122	32 x 4	.....	1945	.....	.....	.....
Pierce-Arrow.....Ow.	Ow.	6-4 x 5 1/2	138	35 x 5	8000	7500	7500	9000	.....
Pilot.....6-50	H-S.	6-3 1/2 x 5	126	32 x 4 1/2	.....	2285	.....	.....	.....
Porter.....46	Ow.	4-4 1/2 x 6 1/2	142	35 x 5	6750	Chassis	Price	.....	.....
Premier.....6-D	Ow.	6-3 1/2 x 5 1/2	129 1/2	35 x 5	4600	4600	5600	6100	.....
Premocor.....6-40-A	Falls.	6-3 1/2 x 4 1/2	117	32 x 3 1/2	.....	1295	.....	.....	.....
Premocor.....4-80	Dues.	4-4 x 6	117	32 x 4 1/2	.....	3865	.....	.....	.....
Raleigh.....A-6-60	H-S.	6-3 1/2 x 5	122	32 x 4 1/2	2450	2450	3300	3400	.....
Ranger.....A-20	Ow.	4-3 1/2 x 5	116	32 x 4	1850	1850	.....	2700	.....
R & V Knight.....R	Ow.	4-3 1/2 x 5	116	32 x 4	.....	2150	.....	4200	.....
R & V Knight.....J	Ow.	6-3 1/2 x 4 1/2	127	32 x 4 1/2	3350	3350	4000	4200	.....
Reo.....T-6	Ow.	6-3 1/2 x 5	120	33 x 4	1850	1850	2700	2750	.....
Revere.....C	Dues.	4-3 1/2 x 6	131	32 x 4 1/2	4850	4650	4650	6500	.....
Roamer.....6-54-D	Cont.	6-3 1/2 x 5 1/4	130	32 x 4 1/2	.....	.....	4500	5000	.....
Rock Falls.....14000	Ow.	6-3 1/2 x 5 1/4	136	35 x 5					

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acasoa, H	2 1/2	\$3500	4 1/2 x 5 1/2	36x4	36x4d	W	Conestoga, 20	1	.....	3 1/2 x 5	34x3 1/2	34x5	W	Grant, 17	1 1/2	2675	3 1/2 x 5	35x5 1/2	38x7 1/2	I
Acasoa, L	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5d	W	Conestoga, 30	2	.....	3 1/2 x 5	36x4	36x4d	W	Hahn, J4	1	.....	3 1/2 x 5	34x5	34x5	W
Aca, C	1 1/2	2750	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Cook, 41	2	2000	4 1/2 x 5 1/2	36x6	38x7 1/2	I	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Aca, A	2 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Corbitt, E	1	2400	4 1/2 x 5 1/2	34x3 1/2	34x4	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Aca	3	3650	4 1/2 x 5 1/2	36x6	36x8	W	Corbitt, D	1 1/2	2800	4 1/2 x 5 1/2	36x3 1/2	36x5	W	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W
Acme, B	1	2175	3 1/2 x 5	34x3 1/2	34x5	W	Corbitt, C	2	3500	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Hahn, EF	5	.....	4 1/2 x 6	36x6	40x12	W
Acme, F	1 1/2	2475	3 1/2 x 5	34x3 1/2	34x5	W	Corbitt, B	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x7	W	Hal Fur, E	1	2350	4 1/2 x 5	35x5 1/2	35x5 1/2	W
Acme, A	2	3050	4 1/2 x 5 1/2	36x4	36x7	W	Corbitt, A	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x10	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7 1/2	W
Acme, C	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x10	W	Corbitt, AA	5	5500	4 1/2 x 6	36x6	40x6d	W	Hall	1 1/2	3100	3 1/2 x 5	34x5 1/2	38x7 1/2	W
Acme, E	5	5150	4 1/2 x 5 1/2	36x6	40x12	W	Dart, S	1 1/2	.....	4 1/2 x 5 1/2	34x3 1/2	34x6	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W
Acme, G	5 1/2	1700	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Dart, M	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Akr'n Multi-Trk 20	1	.....	4 1/2 x 5 1/2	34x5 1/2	34x5	W	Dart, W	3 1/2	.....	4 1/2 x 6	36x5	36x10	W	Hall	5	5100	4 1/2 x 5 1/2	36x5	40x6d	W
AB-Power, C	3 1/2	5800	4 1/2 x 6	36x7	36x10	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Hall	7	5100	4 1/2 x 5 1/2	36x5	40x6d	W
AB-American, B-1	1	1795	3 1/2 x 5	32x4	32x4	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
AB-American C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	W	Day-Elder, D	2	2750	4 1/2 x 5 1/2	36x4	36x7	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
American, 25	2 1/2	3575	4 1/2 x 6	36x6	36x4d	W	Day-Elder, C	2 1/2	2950	4 1/2 x 6	36x4	36x7	W	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36x5	36x5d	W
American, 40	4	4575	4 1/2 x 6	36x6	36x5d	W	Day-Elder, F	3 1/2	3750	4 1/2 x 6	36x5	36x5d	W	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6d	W
Apex, G	1	1675	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Day-Elder, E	5	4600	4 1/2 x 6	36x5	36x6d	W	Hawkeye, K	1 1/2	2385	3 1/2 x 5	34x3 1/2	34x5	I
Apex, E	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	W	Dearborn, F	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Hawkeye, M	2	2915	4 1/2 x 5 1/2	36x4	36x6	I
Apex, F	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	W	Dearborn, 48	2	2590	3 1/2 x 5	35x5 1/2	34x7 1/2	W	Hawkeye, N	3 1/2	4345	4 1/2 x 6	36x5	36x10	I
Apex, H	3 1/2	3975	4 1/2 x 6	36x5	36x10	W	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	36x6	I	Hendrickson, I	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Armstrong, HW	2 1/2	.....	4 1/2 x 5 1/2	36x5	36x7	W	Defiance, E	2	2750	3 1/2 x 5	35x5 1/2	38x7 1/2	I	Hendrickson, J	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W
Armstrong, KW	3 1/2	.....	4 1/2 x 6	36x5	36x5d	W	DeKalb, E2	2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Highway, A410	4	.....	4 1/2 x 6	36x5	36x6d	W
Atlas, B	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x5	W	DeKalb, E2 1/2	2 1/2	2600	4 1/2 x 5 1/2	36x4	36x7	W	Highway, B510	5	.....	4 1/2 x 6	36x5	40x6d	W
Atlas, B1	1 1/2	.....	3 1/2 x 5	34x3 1/2	36x6	W	Denby, 12	1	2400	3 1/2 x 5	35x5 1/2	36x6	I	Higraide, A18	1	2100	3 1/2 x 5	35x5 1/2	35x5 1/2	W
Atlas, A	2 1/2	.....	3 1/2 x 5	34x3 1/2	36x6	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	38x7 1/2	I	Higraide, B20	1 1/2	2500	4 1/2 x 5 1/2	35x4	36x6	W
Atlas, (York)	2 1/2	.....	3 1/2 x 5	36x4	36x8	W	Denby, 134	2	2800	3 1/2 x 5	36x3 1/2	36x6	I	Huffman, B	1 1/2	2075	3 1/2 x 5	34x3 1/2	34x6	W
Dispatch, 21	1 1/2	.....	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Denby, 25	3	3600	4 1/2 x 5 1/2	36x4	36x7	I	Huffman, C	1 1/2	1875	3 1/2 x 5	34x3 1/2	34x6	I
Atterbury, 20R	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 27	4	4600	4 1/2 x 5 1/2	36x5	36x5d	I	Hurlbert	2 1/2	.....	4 1/2 x 5 1/2	36x4	34x5	W
Atterbury, 7CX	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x4d	W	Denby, 210	5	5350	4 1/2 x 5 1/2	36x6	40x6d	I	Hurlbert	1 1/2	.....	4 1/2 x 5 1/2	36x4	36x4d	W
Atterbury, 7D	3 1/2	.....	4 1/2 x 5 1/2	36x5	40x5d	W	Dependable, A	1	1650	3 1/2 x 5	34x5	36x6	W	Hurlbert	5	.....	4 1/2 x 6	36x5	36x5d	W
Atterbury, 8E	6	.....	4 1/2 x 6	36x5	40x6d	W	Dependable, C	1 1/2	2350	3 1/2 x 5	34x3 1/2	34x5	W	Hurlbert	5	.....	4 1/2 x 6	36x5	40x6d	W
Autocar, 21UF	2	2300	4 1/2 x 4 1/2	34x4	34x5	D	Dependable, D	2	2650	4 1/2 x 5 1/2	34x5	36x6	W	Indep'd (Iowa), E	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Autocar, 21UG	2	2400	4 1/2 x 4 1/2	34x4	34x5	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Indep'd (Iowa), F	2	.....	3 1/2 x 5	34x4	34x6	I
Autocar, 28Y	3 1/2	4350	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, G	3 1/2	3550	4 1/2 x 6	36x6	38x7	W	Indep'd (Iowa), F	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x4	W
Autocar, 28-S	3 1/2	4500	4 1/2 x 5 1/2	34x5	36x10	D	Diamond-T, T	1 1/2	2450	3 1/2 x 5	36x3 1/2	36x5	W	Indep'd (Ohio), F	1 1/2	2585	3 1/2 x 5	36x3 1/2	36x5	W
Available, H1 1/2	1 1/2	2750	4 1/2 x 5 1/2	36x3 1/2	36x5	W	Diamond-T, U	2	2835	4 1/2 x 5 1/2	36x4	36x7	W	Indep'd (Ohio), H	2 1/2	3285	4 1/2 x 5 1/2	36x4	36x4d	W
Available, H2 1/2	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x8	W	Diamond-T, K	3 1/2	3925	4 1/2 x 5 1/2	36x5	36x5d	W	Indep'd (Ohio), K	3 1/2	4285	4 1/2 x 5 1/2	36x5	36x5d	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond-T, EL	5	4615	4 1/2 x 5 1/2	36x6	40x6d	W	Indiana, 12	1 1/2	2290	3 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, H5	7	5575	4 1/2 x 6	36x6	40x12	W	Diamond-T, S	5	4800	4 1/2 x 6	36x6	40x6d	W	Indiana, 20	2	2950	4 1/2 x 5 1/2	36x4	36x7	W
Available, H7	8	6575	5 x 6	36x6	40x14	B	Doane	2 1/2	.....	4 1/2 x 5 1/2	36x5	36x7	C	Indiana, 25	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x8	W
Avary	1	1800	3 1/2 x 4	34x5 1/2	34x5 1/2	B	Doane	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x5d	C	Indiana, 35	3 1/2	3750	4 1/2 x 5 1/2	36x5	36x5d	W
Beck, A. Jr.	1	1800	3 1/2 x 5	34x3 1/2	34x4	I	Doane	6	.....	4 1/2 x 5 1/2	36x6	40x6d	C	Indiana, 51	5	4775	5 x 6 1/2	36x5	40x6d	W
Beck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	I	Dodge, C	1 1/2	1085	3 1/2 x 4 1/2	33x4 1/2	33x4 1/2	B	Inland, D	2	2950	4 1/2 x 5	34x5	34x5	I
Beck, O	2 1/2	2750	4 1/2 x 5 1/2	36x4	34x7	I	Dorris, K-4	2	3400	4 1/2 x 5 1/2	36x4	36x7	W	International, D	3 1/2	1850	3 1/2 x 5 1/2	36x3 1/2	36x3 1/2	I
Beck, E	1 1/2	2250	3 1/2 x 5 1/2	34x4	34x5 1/2	I	Dorris, K-7	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x10	W	International, S	1 1/2	1500	3 1/2 x 5	34x5 1/2	34x5 1/2	I
Bellmont, A	1 1/2	.....	3 1/2 x 4 1/2	31x4	.....	I	Douglas	1 1/2	2200	3 1/2 x 5	36x5	37x8	W	International, F	1	2050	3 1/2 x 5 1/2	36x3 1/2	36x4	I
Bellmont, B	2	.....	3 1/2 x 4 1/2																	

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Maccar, H-2	2½	3860	4½x5½	36x4	36x4d	W	Pony	1½	400	24x4	28x3½	28x3½	C	Super Truck, 70	3½	4300	4½x6	36x5	40x5d	W
Maccar, M-2	3½	4500	4½x6	36x5	36x5d	W	Power, F	1½	.....	34x5½	36x6	36x6	W	Super Truck, 100	5	5300	4½x6	36x5	40x12	W
Maccar, G	5	5500	4½x6	36x5	40x6d	W	Power, C	3½	.....	4½x5½	36x6	40x10	W	Super Truck, 150	7½	.....	5 x6	36x6	40x7d	W
MacDonald, A	15	5750	4½x6	40x7	40x14	W	Francor, B-143	1½	.....	36x5	36x6	36x6	W	Texan, A38	1½	.....	3½x5	33x4	33x4	I
Mack, AB	1½	3450	4 x5	36x4	36x3½d	D	Rainier, R-11	1½	2150	36x5	36x5½	36x5½	W	Texan, TK39	1½	.....	3½x5	36x6	38x7	W
Mack, AB	1½	3000	4 x5	36x4	36x3½d	D	Rainier, R-15	3½	4500	4½x5½	36x5	36x5d	W	Texan, TK	1½	.....	3½x5	36x6	38x7½	W
Mack, AB	2	3300	4 x5	36x4	36x4d	C	Rainier, R-19	1	2350	36x5	36x4½	31x4	W	Tiffin, F15	1½	2895	4½x5½	36x3½	36x5	W
Mack, AB	2	3750	4 x5	36x4	36x4d	C	Rainier, R-16	1½	2600	36x5	36x4½	34x5	W	Tiffin, F25	2½	3580	4½x5½	36x4	36x3½d	W
Mack, AC	3½	4950	5 x6	36x5	40x5d	C	Rainier, R-18	2	2950	4½x5½	36x4	34x6	W	Tiffin, F35	3½	4780	4½x5½	36x5	40x5d	W
Mack, AC	5	5500	5 x6	36x6	40x6d	C	Rainier, R20	2½	3650	4½x5½	36x4	34x7	W	Tiffin, F50	5	5850	4½x6	36x6	40x6d	W
Mack, AC	6½	5750	5 x6	36x6	40x12	C	Rainier, R17	5	5250	4½x5½	36x6	36x6d	W	Tiffin, F60	6	6050	4½x6	36x6	40x12	W
Mack, AC	7½	6000	5 x6	36x7	40x7d	C	Ranger, TK	2	2575	36x5	36x6	36x6	W	Titan, HT	3½	4550	4½x6	34x4*	40x5d	I
Mack Trac, AB	5	3400	4 x5	36x4	36x4d	C	Ree, F	1½	1385	4½x4½	34x4½	34x4½	B	Titan, HD	3	5400	4½x6	36x5	40x6d	I
Mack Trac, AC	7	4950	5 x6	36x5	40x5d	C	Reliance, 10A	1½	2500	4 x5½	36x3½	36x5	I	Titan, TS	2½	3400	4½x5½	34x4*	36x4d	I
Mack Trac, AC	10	5500	5 x6	36x6	40x6d	C	Reliance, 20B	2½	3200	4½x5½	36x4	36x4d	I	Tower, J	1½	3000	4½x5½	35x5	38x7	W
Mack Trac, AC	13	5750	5 x6	36x6	40x12	C	Republic, 10E	1	1645	36x5	35x5½	35x5½	I	Tower, H	2½	3475	4½x5½	36x4	36x7	W
Mack Trac, AC	15	6000	5 x6	36x7	40x7d	C	Republic, 11X	1½	2195	36x5	36x5	34x5	I	Tower, G	3½	4400	4½x5½	36x5	36x5d	W
Master, JW	1½	2990	4½x5½	34x3½	34x5	W	Republic, 19	2½	2795	4½x5½	36x4	36x7	I	Tower, C	2	1595	3½x5	34x3½	34x5*	I
Master, W	2½	3290	4½x5½	34x3½	36x7	W	Republic, 20	3	3845	4½x5½	36x5	36x10	I	Transport, 20	1	1850	3½x5½	34x3½	34x4	I
Master, D	2½	3540	4½x5½	34x4	36x7	D	Riker, BB	4	.....	4½x6	36x5	36x5d	W	Transport, 30	1½	2250	3½x5	36x3½	36x5	I
Master, A	3½	4190	4½x6	36x5	40x5d	D	Riker, BB	4	.....	4½x6	36x5	36x6d	W	Transport, 50	2½	2785	4½x5½	36x4	36x7	I
Master, E	3½	4640	4½x6	36x5	40x5d	D	Rock Falls, 11	.....	.....	3½x5½	35x5½	35x5½	B	Transport, 70	3½	4195	4½x6	36x5	36x10	I
Master, B	5	5290	4½x6½	36x6	40x6d	D	Rewe, CW	1½	3000	36x5	36x6	36x6	W	Traylor, C	1½	.....	4½x5½	34x3½	34x5	W
Master, F	5	5440	4½x6½	36x6	40x6d	D	Rewe, HW	4	4500	4½x6	36x5	36x6d	W	Traylor, C	2	.....	4 x5½	36x4	36x7	W
Master Trac, T	6	3740	4½x5½	34x4	36x4d	I	Rewe, C. D. W.	2	3300	4 x5	34x4	36x3½d	W	Traylor, D	3	.....	4½x5½	36x4	36x8*	W
Maxwell, 1½	1½	.....	36x4½	32x3*	32x4*	W	Rewe, G. S. W.	3	4150	4 x6	34x5	36x5d	W	Traylor, E	4	.....	4½x6	35x5	40x10	W
Menominee, HT	1	2080	3½x5	34x3½	36x5	W	Rowe, G. P. W.	3	5250	3½x5½	38x7½	42x9½	W	Triangle, AA	1½	1600	3½x5	35x5½	35x5½	I
Menominee, H	1½	2725	4 x5	36x3½	36x5	W	Rowe, F. W.	5	5500	4½x6	36x6	40x6d	W	Triangle, A	2	2350	3½x5½	34x3½	34x6*	I
Menominee, D	2	3245	4 x6	36x4	36x4d	W	Rumley, A	1½	2720	3½x5½	36x3½	36x5	W	Triangle, C	2	2700	3½x5½	36x4	36x6*	I
Menominee, G	3½	4270	4½x6	36x5	36x5d	W	Samson, 15	1½	.....	32x4	32x4	32x4	B	Triangle, B	2½	2950	4 x5½	36x4	36x7	I
Menominee, J3	5	5450	4½x6	36x5	40x6d	W	Samson, 25	1½	.....	35x5	35x5	35x5	B	Twin City, B.W.	2	3000	4 x5½	36x4	36x7	I
Moline, 10	1½	2250	3½x5	34x5½	36x6	W	Sandow, G	1	2295	3½x5	34x4½	34x5	W	Twin City, A. W.	2	4400	4½x6	36x5	40x5d	W
Morland, 20N	1	2850	3½x5	34x5½	36x6	I	Sandow, CG	1½	2590	3½x5	34x4	34x6	W	Twin City, FWDB	3½	.....	5½x6	36x6	36x6	I
Morland, 20B	1½	3125	4½x5½	36x3½	36x6	W	Sandow, J	2½	3375	4½x5½	36x4	36x7	W	Twin City, FWDA	3½	.....	5½x6	36x7	36x7	I
Morland, 20C	2½	3900	4½x5½	36x4	36x8	W	Sandow, M	3½	4295	4½x5½	36x5	36x5d	W	Ultimate, A	2	3200	4 x5½	36x3½	36x5*	W
Morland, 20G	3½	4975	4½x6	36x5	40x5d	W	Sandow, L	5	.....	4½x5½	36x6	40x6d	W	Ultimate, AJ	2	3200	4½x5½	35x5½	38x7½	W
Morland, 20J	5	5350	4½x6	36x6	40x6d	W	Sanford, XV25	2½	3350	4½x5½	36x4	36x4d	W	Ultimate, B & BL	3	3750	4½x5½	36x4	36x4d	W
Mutual, 2B	2	3450	4 x6	36x4	36x8	W	Sanford, XV35	3½	4200	4½x5½	36x5	36x5d	W	Union, F	1½	3150	4 x6	36x5	36x8*	I
Mutual, 2BP	2½	4150	4 x6	36x7	42x9½	W	Sanford, XV50	5	5100	4½x6	36x5	40x6d	W	Union, H	4	3975	4½x6	36x6	36x10	I
Napoleon, 7	¾-1	.....	3½x5	38x4	32x4½	I	Schacht, 2-Ton	2	3550	4½x5½	36x4	36x7	W	Union, J	6	5450	5 x6	36x6	40x14	I
Napoleon, 7	1	1535	3½x5	35x5*	35x5*	I	Schacht, 2½-Ton	2½	3850	4½x5½	36x4	36x4d	W	United, A	1½	2445	3½x5½	36x3½	34x5*	I
Napoleon, 11	1½	1860	3½x5	35x5*	36x6*	I	Schacht, 3½-Ton	3½	4350	4½x6	36x5	36x5d	W	United, B	2½	3150	4½x5½	36x4	36x7*	I
Nash, 2018	1	1895	3½x5½	34x3	34x4	I	Schacht, 5-Ton	5	5350	4½x6	36x5	40x6d	W	United, C	3½	3975	4½x5½	36x5	36x5d	I
Nash, 3018	2	2550	3½x5½	34x4	34x6	I	Schwartz, A	1	.....	3½x5	32x4½	34x4½	B	United, V	5	5100	4½x6	36x6	40x6d	I
Nelson, F1½	1½	.....	4½x5½	36x3½	36x5	W	Schwartz, BW	1½	2600	3½x5½	34x3½	34x7*	W	U. S., N	1½	.....	3½x5	36x3½	36x5*	I
Nelson, F2	2	.....	4½x5½	36x4	36x7	W	Schwartz, C.W.S.	2½	3200	4½x5½	36x4	36x8	W	U. S., R	3	.....	4 x5½	36x4	36x4d	W
Nelson, F3½	3½	.....	4½x5½	36x5	36x5d	W	Schwartz, DW	5	4900	4½x6	36x6	40x12	W	U. S., S	4	.....	4½x5½	36x5	36x5d	W
Nelson, FCS	5	.....	4½x6	36x6	40x6d	W	Solden, 1½A	1½	.....	4½x5	34x3½	34x5	W	U. S., T	5-6	.....	4½x6	36x6	40x6d	I
Nelco, D	2	3100	4½x5½	36x4*	36x7*	W	Solden, 2½A	2½	.....	4½x5½	36x4	36x7	W	Vellie, 46	1½	2200	3½x5½	36x3½	36x5	I
Nelco, H	2½	3500	4½x5½	36x4*	36x8*	W	Solden, 3½A	3½	.....	4½x5½	36x5	36x10	W	Victor, A	1½	2050	3½x5½	36x3½	34x5	I
New York, M	1½	3100	4½x5½	36x3½	36x5	W	Solden, 5A	5	.....	4½x6	36x6	40x12	W	Vim, 25	1½	1535	3½x5½	31x4½	31x4½	W
New York, N	2-2½	3300	4½x5½	36x4	36x4d	W	Sonoca, M20	½	.....	3½x5½	36x3½	36x5	W	Vim, 31	2	2475	3½x5½	35x5½	35x5½	W
Niles, E	2	3000	4½x5½	36x4*	36x7*	W	Sorvice, 220	½	2415	3½x5½	36x4½	36x5	W	Vim, 22	2	3150	3½x5½	36x4	36x6	W
Noble, A21	1	.....	3½x5	34x4½	35x5	W	Sorvice, 31	1½	2985	4 x5½	36x3½	36x6	W	Vim, 23	3	3950	4½x6	36x5	36x5d	W
Noble, B30	1½	3½x5½	36x3½	36x5	W	Sorvice, 36	1½	34											

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

Vol. LXVI

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No. 10



"Company"—Two Kinds



The young folks want the farm to be a place to live on instead of one to die on, and the tractor, the truck and the car are the answer to what they want.—From "What the Country Dealer Can Do to Sell Right Now," beginning on the next page

How to Sell Cars, Trucks and Tractors—RIGHT NOW

The Last of Three Stories on To-day's Market, How to Find It and How to Turn Its Buying Power Into Profits

By NEAL G. ADAIR

Story No. 3—What the Country Dealer Can Do to Sell Right Now

THE country dealer who is going to sell right now needs to sit down for a study of his territory and ask himself two questions:

1. Who *can* buy?
2. Who *should* buy?

Then, closing his ears to the calamity howlers who will try to tell him that there's no money in the country, that nobody can buy, and to the ordinary garden variety of pessimists who will insist that nobody will buy, he should set himself to work to answer his questions, which means canvassing the people who can buy—*people with power to buy*—and selling to the people who should buy—*people who want or need cars, trucks and tractors*.

The loudest protests against losses occasioned by the readjustment process have come from the country districts, from the farms. This is not to say that the farmer is quickest to howl. Generally speaking, he has most reason to howl. Every farmer has suffered directly from the change through which the country is passing, but every city man has not—many thousands of employed people and some independently in business do not know except by hearsay that anything out of the ordinary has been going on in American business.

Of course, the farmer has howled and his howls have scared a lot of people. But they shouldn't scare the country dealer, who knows his farmer; who knows that a great many farmers made a great deal of money throughout and immediately after the war—a great deal more than they have lost or possibly could lose through price reductions on a single

year's crop; who knows that despite some unfortunate investments, some more unfortunate speculations, there are still in every county in every State in this country many rich farmers and no farmers, generally speaking, who have gone broke.

Have You Read ALL the Stories in This Series?

IN the first of these stories on Today's Market, printed in Motor World Feb. 23, Mr. Adair said: "There is no patent medicine that will keep this country and its businesses on a sound business basis. It's just a plain case of work. The farmer is going to work again, and he is just about ready now to quit talking about last year's 'raw deal' and about cutting down this year's crop acreage. The factory man is going to work again on orders which hard working salesmen are sending back from their round through territories that are slowly responding to the uplift in business everywhere apparent.

"The whole country is going to work again—it is already hard at it—and it is going to buy what it needs and wants with the profits of its work. Is it necessary to add that it is going to buy from the merchants who are working with it?"

In the second story, printed March 2, was told what the city dealer can do to sell right now, and in this story are discussed the problems of the country dealer.

The three stories, based on an investigation by the writer which took him on a month's trip through eight states in the heart of the country, are intended to point the way out of the difficulties of the current season—Spring of 1921—into the work of the year. You are urged to READ THE WHOLE SERIES.

The farmer has done a lot of talking about reduced acreages—and that has scared a lot of people, too. But it shouldn't scare the country dealer, who knows his farmer; who knows that the farmer is going to make all the profit he can out of the only asset he has—his land. *And the wise country dealer is going to help the farmer make that profit—and incidentally make one for himself—by selling the farmer the car or the truck or the tractor, or all three, that will enable the farmer to beat the handicap of lower prices by getting from his fields and to market a greater yield per acre and per hour of work.*

It is pretty generally recognized that a successful merchant is one who, figuratively speaking, keeps step with his market. But an exception to the rule should be added—*except when his market is stepping backward*. Ever since circumstances detached farm products prices from the sky rocket and put them on the toboggan the farm market—for everything—has been stepping backward. Farmers, who are usually blue when winter pens them in and leaves them with little to do and nobody to talk to, have been blue-black this past winter and have passed their time resolving that they wouldn't buy anything until other prices went down as far as theirs. They are still resolving but every country dealer knows that the resolution season ends when the working season begins—and the break is already here, as shown by the rapidly increasing movement of hoarded crops from farmers' to distributors' granaries. The farmer is getting rid of the crop that disappointed him to clear the way for another. And when the new crop begins to show itself above the soil—then the farmer will be a new man, as he has always been since the first agriculturist observed the phenomenon of nature *working for him*.

It has been pretty hard for the country dealer to avoid being blue with his blue farmer neighbor but now—

There are five definite things the

country dealer can do to sell right now and right on through the year:

1—*Fight gloom.* Talk the farmer out of his pessimism and prepare the ground for sales to the man who is preparing his ground for crops.

2—*Reawaken the farmer's interest in things automotive.*

3—*Analyze the market*—list the farmers with power to buy.

4—*Canvass the market*, which will re-

sion—and there hadn't been a darn customer in the place all afternoon to interrupt the proceedings. The farmers had gone and he was just lowering his feet from the stove rail preparatory to locking up and going home to a cozy night's rest—his wife insisted that he got enough in the daytime—when Bob Bright, who sells tractors and also trucks a little way up the street, blew in with a blast of late winter snow.

know anybody wants to buy me out?"

"No, I don't. I don't know anybody that wants to buy *nothing*," Bright replied with some heat, "but I know somebody that's not going to sell out *and that's me*. I am going to stay in business and I am going to *sell* and—well, the more boys and girls that come home from the factory towns the better I'll like it."

Blue laughed, about as he had heard

Three Ways Around the Country Dealer's Biggest Obstacle —How to Finance Time Sales

THE country dealer who is **SELLING**—in every sense of the word—may find himself smack up against a wall of resistance to doing business which seems insurmountable. He may be unable, or he may think he is unable, to finance time sales—and there is no use arguing that any great volume of business can be done in the country—in cars, trucks or tractors—without credit.

There are some walls you can't climb—**BUT YOU CAN GO AROUND THEM.**

Here are three ways around the wall of the banker's "No":

1 Change the "No" to "Yes" or find another banker who will say "Yes." There are numerous ways of changing the "No" to "Yes"—show the banker the importance of the product you sell to the development of HIS territory, agriculturally, commercially, industrially or as a place worth living in; show the banker the stability of your own business, and if your books are not in shape to show it, bring in an accountant to put them in shape; show the banker that you have friends who believe in you, who will stand by your

right as a merchant to a merchant's credit, if necessary and the circumstances warrant, going to the extreme of the Ohio dealer who brought one of these "the automobile is a luxury" bankers to time by inducing more than a dozen influential friends not merely to threaten but actually to withdraw their deposits from the banker's institution. And if the banker won't or can't yield get all your friends back of you to interest another banker, perhaps in the next town, to help you purchase stock and handle time sales.

2 Appeal to your distributor either to help you change the banker's mind or to get credit for you in his own name. In Pennsylvania there is a distributor whose country dealers failed to inspire confidence in their bankers. His persuasive powers failed to help the situation, but several of the bankers hinted that they had a little money to lend and wouldn't mind making him a customer. In something like a dozen different country banks the distributor borrowed an aggregate of \$100,000, then turned around and loaned it to his dealers at the same rate to finance their businesses.

3 If the banker won't yield and the distributor can't help, **FIND SOMEONE OUTSIDE THE BANK TO BORROW FROM.** In the Middle West a number of dealers are doing this, particularly in financing sales to farmers. The dealer approaches a moneyed man, possibly a retired farmer or merchant, whom he knows well and who, in turn, knows the dealer and his reputation. He explains the inability or unwillingness of the banker to extend credit and asks for assistance in putting in stock or in handling the paper of a prospect whom the moneyed man also knows. It is a chance for the moneyed man to make the maximum rate of interest on some of his money instead of letting it lie in the bank at 3 or 4 per cent. The plan has worked out admirably in a number of communities. It can be applied in many more—where is there a town without at least two or three men of means, well disposed toward the automotive business and the men representing it locally and not particularly averse to letting their money work a little harder for them than it will work in bank vaults?

veal, out of the list of men with power to buy, those who should buy—those who need or want cars, trucks or tractors or who can be convinced of their need or desire.

5—*Sell on this basis*—show what the product will do, not merely what it looks like or what it is made of.

1—How to Fight Pessimism

The first thing any man has to do who is going to fight pessimism is to make sure there is none in his own system. Just read this little story of Ben Blue and Bob Bright:

It had been a great day for Ben Blue. Back by the stove in the northeast corner of his little tractor and implement salesroom he had helped half a dozen farmers place definitely on somebody's shoulders all the blame for the depres-

Blue subsided into his chair and waved Bright to another but Bright remained standing.

"How's business?" he asked.

"Rotten; how is it with you?"

"Well, I wouldn't say that—"

"What would you say?" Blue retorted. "Did you sell anything to-day?"

"No, but—"

"There you go again—'but,' " Blue shot at him. "You didn't sell anything to-day and you haven't sold anything for a month, but— There ain't any 'but' to it. There ain't any business anywhere. I had some farmers in here to-day and you couldn't sell 'em a toothpick. They haven't bought anything all winter and they're hanging on to their last year's crops and—and—now their boys and girls are coming home from the factory towns and—say, do you

the villain laugh in "East Lynne" down at the Opera House at the last show before the movies took the fort some years back.

Bright went on. "Ben," he said, "I've been getting up a list of farms in this territory where a boy or a girl has come back from the factory and I'm going to sell those boys' and girls' fathers trucks and tractors and I'm going to get a car agency and divide my little business into three departments and I'm going to sell goods. I tell you those boys and girls aren't going to live on the same kind of farms they left. Some of 'em, maybe, spent their factory money as they earned it, but they weren't all silk shirt and crêpe de chine petticoat fanciers. They have come back home because they had to, sure, but most of them realize that the factories won't need them again for

a long, long time. They are back home *and they are going to make it home.*

Blue was beginning to show reluctant interest and Bright warmed to his subject.

"I've been talking with some of these boys who have come home from the factories. They're not hankering to walk all day behind a plow again—and I'm going to sell them tractors.

"And they're not hankering to bed down a team of horses and wait around an hour or two to water 'em after they've cooled off after hauling a load of stuff to town—and I'm going to sell 'em trucks.

"And they're not hankering to stick around the farm night after night because it takes half the night to drive the old nag to town and back for the movies—and I'm going to sell 'em cars.

"Ben, cash in on the young folks—the ones that have come back from the factories and the ones that never went. The old man always does about what the young folks want—your old man did, didn't he?—and right now the young folks want the farm to be a place to live on instead of one to die on, and the tractor, the truck and the car are the answer to what they want.

"Ben, I've been mopping up pessimism all winter, just as you have. But I got hold of myself to-day and wrung it all out. I'm going to look into every obstacle to selling and see if it isn't a help, after all. I'm going out on the farm route, I'm going to drive from farm to farm and I'm going to talk and talk, and I'm going to show these farmers of ours that it's a damn good country we have after all—and I'm going to sell goods."

"And so am I—much obliged," said Blue.

Blue and Bright are not myths. There are many Blues and many Brights out in the country to-day and both are going to sell right now—if they will.

They are going to find that these farmers' organizations aimed at holding down buying, organizations, for instance, such as those formed in some sections to use farm implements collectively, are like a lot of organizations formed in moments of indignation—they sound fine, but—

Can you imagine a farmer waiting until Jones and Smith and Hansen get through with Jones' tractor to do his plowing? And another farmer waiting until Smith and Jones and Hansen get through with Smith's cultivator to do his cultivating? These we-won't-buy organizations looked all right—last January when nobody had to do any plowing or cultivating—but let Jones or Smith or Hansen stand around on one foot, with the feel of growing time in his veins, waiting to get a chance at somebody else's implements and Jones or Smith or Hansen will be the liveliest sort of a prospect for the implement he wouldn't buy when the gloom was on the corn stubble.

2—How to Reawaken the Farmer's Interest

The country prospect who is coaxed out of his gloom, or half coaxed out or still befogged in it can be brought up to the point of buying only through activity

which arouses his interest. There are opportunities along this line for the country dealer in advertising. There should be no let-up, rather, in some cases there should be a stimulation of advertising, bright, cheerful, sensible, infor-

One Country Town— and Two Country Dealers

Town's Population—20,000

LAWRENCE BUICK CO., LAWRENCE, KAN.—Roscoe and Paul Stubbs and H. J. Hanna, heads of this company, have three men, two of them the Stubbs brothers, constantly on the road selling Buick and Cadillac cars. Using their owner list, the territory registration list and the Capper Farm Directory as a basis, they are systematically canvassing the field, composed mostly of farmer prospects. They are getting new prospects from every old prospect they talk to, often with the most valuable sort of information about the new prospects' buying power and desires, and they are selling cars—have sold them all winter. They have estimated the year's replacement and first car possibilities of the territory, have definitely set their share of the possible sales and are going after them.

C. W. SMITH, LAWRENCE, KAN.—Selling the Ford car and truck and Fordson tractor, Smith keeps men on the road the year round. In February he reawakened farmers' interest in tractors by inviting 115 tractor owners and 185 prospects to what he called Tractor Owners' Day—a combination lecture and moving picture program held in a hired hall. The farmers and their families came in from miles around—the entertainment broke the ice of their winter seclusion—saw the tractor at work in the movies and heard a practical talk on power farming by an agricultural college expert. Since Tractor Day Smith has been doing early plowing jobs for farmers without tractors, at so much per hour, and his salesmen, men who thoroughly understand farms and what the tractors will do on them, have been working on these and other prospects—with good results.

native advertising, written in the farmer's language and carried in mediums the farmer reads. There should be a persistent mail effort, letters and circular matter sent to the farmer right now, before he gets into the spring rush when time to read is scarce. Perhaps the tractor dealer can arrange a local demonstration, a lecture by a farm power authority or a farm power moving picture show, with his manufacturer or distributor co-operating, and invite his prospects in through the medium not merely of ad-

vertising but of personally directed letters with admission tickets attached. Perhaps the truck dealers can stage a local hauling demonstration, with difficult jobs performed under difficult traction conditions, or perhaps he can send a caravan of one or two trucks, possibly with a trailer, out into the territory to do hauling jobs for some of his prospects, following the advertising and personal invitation plan to arouse interest and attention. Perhaps the car dealer can get from his distributor one of these movies of the "insides" of an automobile or a tire conservation speaker or some other sort of lecturer and put on a "show" to arouse interest in his automobile.

After the shut-in period of winter farm populations are always responsive to any sort of invitation that promises something new, and a population interested is a population at least partly sold on the thing which provides the interest.

3—How to Analyze the Market

Along with his job of arousing interest, the country dealer, more than ever this year, needs to analyze his market—to find the people with power to buy. Opening the salesroom doors and waiting for buyers won't do any more than it will in the city. Who can buy, where is he? The question should be on every dealer's tongue. Owner lists offer the readiest source of information and will yield resale prospects—more of them perhaps than a dealer may think possible until he starts to analyze them. Then there are the registration lists of cars and trucks, showing how long they have been in use and indicating possibilities of replacement sales. In some states there are farm directories, listing farmers, the acreage and assessed valuations of their farms, the varieties of crops produced and the equipment employed—the finest sort of guide to men who can and should buy. In nearly all sections there is some sort of town or country directory and if that is lacking there is the tax list, open in the county clerk's office to any citizen and furnishing definite information of farm wealth—which means farm buying power.

4—How to Canvass the Market

Every country dealer can proceed this year on this basis: The salesroom is a fine place to show cars, trucks or tractors and the show should be worth attention. And it is a fine place to bring prospects. But it is not the place to find prospects. Only canvassing will find them—on their farms or in their stores or homes. The country dealer and his salesmen need to be on the road—with a car to show the car prospect, with a truck to show the truck prospect, with a car to take the tractor prospect over to the farm where one of his tractors is in operation.

Every country dealer needs an indexed prospect list, with "ticklers" to see that calls are made at the proper time. He needs system in routing his calls, to save waste time and traveling and to make the minutes count—to spend them with prospects instead of on the road. He

needs sales letters and circulars to back up his calls and system to see that this mail matter is sent out when it will do the most good. And he needs to know—

5—How to Show What the Product Will Do

The farmer is getting tired of being told that a tractor is made of this and that-kind of iron, steel, etc. He wants to know what the tractor will do. And in like manner, he wants to know what the truck will do—on his farm—and what the car will do—for his farm and his family. The tractor dealer can do a lot of fine missionary work, which will produce results, if he will take advantage of every opportunity to get farmers, and particularly farmers' sons, to try

out his product. They will want the groundwork of the specifications information, but the real selling argument is in the testing of the machine. Get a farmer, or a farmer's son, to realize that your tractor plows faster, deeper and straighter than horses can plow and then remind him that it eats only when it works and doesn't have to be bedded down after the day's work is done, and you have sold the tractor. For the truck the same line of argument will prevail—time saved, production speeded up, farm products increased, drudgery eliminated. And for the car, almost anybody knows what it will do, but the country dealer who gets the story across to ma and the boys and girls, by way of a demonstration, for instance, has just about cleared the way to pa's pocket-

book and closing him is made easy. And that's the end of the story.

And Now—

And now as to 1921 and 1921 business. Let's forget all about 1920. It was a phenomenal year—but it's gone. Let's quit comparing this year with it. Let's look back two or three years, when our businesses weren't as big as they are now. Then let's cut loose and make this year's business so big that those of two and three years ago will look sick beside it.

Let's stop agreeing and sympathizing with the hard-times "orators." Let's KNOW what we have to sell and what it will do. Let's KNOW our territory. Let's CANVASS our territory. LET'S SELL.

Salt Lake City Show Gives Promise of Stronger Spring Demand

Salt Lake City, Feb. 23.

AT the Fourteenth Annual Salt Lake Automobile show the buying spirit was perhaps only even with the average of previous exhibitions but the "shopping spirit" was many times greater this year. Keen interest and appreciation of the motor cars' possibilities manifested itself everywhere.

As is the tendency in other merchandise lines, the public here is reluctant to purchase until its desire for full understanding of the vehicle has been satisfied by painstaking and exacting investigation.

With this future in view Intermountain motor car and accessory dealers have set themselves to the task of preparing an educational campaign based entirely upon competitive salesmanship, and they will be fully prepared with the actual coming of spring and the touring season for the usual appearance of increased sales.

Dealers were unable to dispose of their used cars during the fall and winter except at considerable loss. The reason for this has been eliminated by the automobile show.

Individuals, hard pressed for ready cash, virtually gave their cars away in order to obtain a small amount of money needed to tide them over the period of general depression that has been present in this territory for several months. Dealers could not sell their cars because they were undersold by private owners of automobiles.

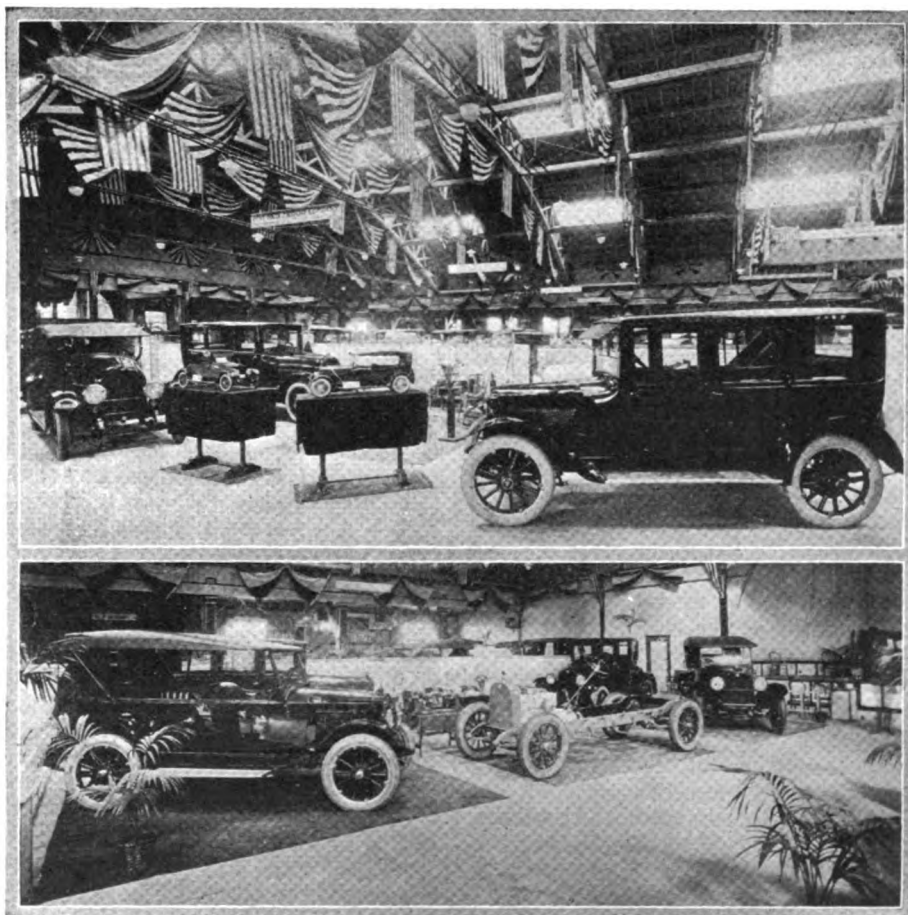
With thousands of prospective purchasers viewing the automobile display every day, the tendency to buy second hand cars has been replaced by the desire for the latest models. Used car sales are at a standstill and will apparently remain so until the annual distribution of new machines is made.

Dealers and distributors in this territory are more able to cope with the situation than ever before. Although only organized a year ago the Intermountain Automotive Trades Association, com-

prising a territory of Utah and part of Wyoming and Nevada, has flourished and was able to hold the automobile show under its auspices this year. With 2000 dealers congregated in Salt Lake during the automobile show and the an-

nual trades association convention, there seems hardly a vestige of doubt that there will be no lack of co-operation to aid materially in closing the automobile sales that are hovering just a few days away.

Strong Merchandising Features



Rugs and palms, plenty of space between cars, and effective arrangement of the exhibits gave the Salt Lake City show, held by the Intermountain Automotive Trades Association, particularly strong merchandising value

This Is a Story About

System in Business

And What It Means to the Automotive Dealer—Some Thoughts on Costs and Earnings and the Importance of Accurate Knowledge Regarding Them

ACCOUNTING tells the financial story of business. And, to the business man, this is the most interesting story that can be told. Real accounting tells him whether his business as a whole is making or losing money, and it tells which departments are responsible for this profit or loss.

The dealer is in business primarily to make money. And the only sure way of finding out whether he is doing what he sets out to do is to have an accounting system that will show the facts.

If his records are not of this character, he is staggering almost blindly. He is reducing his chances of success. He is no more in a position to navigate his business through these stringent times than a mariner would be to steer his ship in a wind tossed sea without a compass.

FIRST, an accounting system should provide a picture of the business as a whole. It should show what total assets are, and also liabilities. *And if an accounting system presents a true picture, it will not show any assets which are not real.* It will make provision for writing off uncollectable accounts and depreciation on equipment. It will provide the facts needed to get a loan from the bank.

The great big picture of a dealer's business will be constructed of a number of smaller ones, one for each department. Each of these component pictures will depict conditions in the department it represents. Perhaps the view of the service department, as presented by the accounting system, shows that it lost considerable money last month. This isn't a satisfactory condition. So the dealer immediately starts an investigation to eliminate this loss. Or it may be the accessory department, or the filling station. The accounting system is a tell-tale. When the dealer makes up the statement of his business at the end of the month, it will show the weak spots. And it gives the opportunity to bolster up the weak spots. The dealer is given a chance to plug the leaks before too much is drained out of his treasury.

Suppose the statement showed that tire sales had been practically nil for the preceding month. The dealer has a considerable investment in tire stock, and the carrying expense is quite heavy. A little sales promotion here might start things going—some advertising in the local newspapers and some sales letters. Perhaps some deal-

A New Department for Motor World Readers

IN next week's number Motor World will open a new department—System in Business.

This department will discuss the fundamentals of cost and accounting, system in management of sales and service and analysis of the various departments of all types of automotive businesses.

The department is intended to assist Motor World readers in working out their system problems. It will answer readers' questions concerning system and accounting, whether these questions concern the Motor World Accounting System or any other system.

Readers are invited to study the new department and refer to it any questions of detail or policy which may trouble them.

ers haven't stopped to consider that an accounting system can be used to shape the policies of a business in this way.

Accounting means work. The small garageman may find it necessary to do the job himself. If it is too much of a burden, perhaps he can get an employee in a local bank or store who is familiar with accounting, who will jump at the opportunity to make some extra money by putting in a night or so every week on his books. It may mean work for the garageman, but it will save worry.

Simplicity is a very essential feature of a satisfactory accounting system. Many dealers are fighting shy of accounting because they are afraid that it will tie both themselves and their businesses up in endless yards of tangled red tape. This is a misconception. Red tape and system are not synonymous. If a business is so highly organized that it is cumbersome and expensive to operate, then it is in the red tape class. But an accounting system of the right kind makes for smooth and economical operation. The cost of such an accounting system will be amply repaid.

Accounting consists of something more than making a record of accounts receivable and payable, and of cash. To be valuable, the financial records of a business must show the costs of doing business accurately and in detail. A business man can't direct the various phases of his business intelligently if all he knows is that his available cash plus his accounts receivable plus his inventory is greater than his accounts payable. This merely indicates that he is solvent. It is of no assistance in ferreting out the little leaks and inefficiencies that are eating up his profits.

The provision in an accounting system for reckoning costs is a very important feature. This enables the dealer to determine accurately just what the expenses in connection with each department are. Comparison of these figures with the income obtained from each department, tells whether any particular department is an asset or a liability to the business. If it is

the latter, he knows about it and can work to convert it into an asset. If a department is paying a profit, an analysis of the cost figures may make it possible to increase the proportion of profit. If a business man doesn't know what his costs are, he can't tell whether they are too large.

In arriving at figures relative to cost, the proper distribution of overhead is a most important consideration. Overhead consists of rent, insurance, heat, light, power, general administrative expense, etc. The division of these charges between the various departments is a very difficult problem. A common solution is to lump all the charges, and to divide the total between the various departments in proportion to the gross sales of each. For the automobile dealer, this method will give very satisfactory results. Another method, which is more complicated but more accurate, is to charge each department with the part of the overhead which is necessary to its operation. For instance, power is

ordinarily used for running the tools in the shop and for the elevator. The former is an expense of shop operation, and the latter of the garage. There is no justification for charging a portion of this expense to the sales department unless it actually uses power in some way. The same applies to rent. This should be apportioned according to the area and value of the space used by each department. This method of distributing overhead will provide more accurate costs, but it is doubtful whether the inaccuracy of the arbitrary system described first are sufficiently large to warrant the adoption of a system involving the pro rata distribution of individual costs.

In charging costs, it is important to credit a department for any work it does for another department. Failure to do this often results in one department showing a fictitious loss. The service department suffers for this reason most frequently.

Many dealers regard their sales departments as the mainspring, and the service department as a necessary adjunct, which eats up their profits on sales. In a great many cases, the service department operates at a loss because it does not get a square deal from the accounting system. It is expected to perform and pay for all free service whether rendered under the

guaranty or as a matter of policy.

Free service is sales promotion. In case of a defective part, which must be replaced, the labor should be charged to sales because the replacement of a defective part is part of the contract made when the sale was consummated. It is part of the selling expense. In a similar manner, maintenance and adjustment work per-



formed free, or rebates on service bills, are properly chargeable to sales because policy dictates that these allowances be made in order to create goodwill and in that way to foster sales. The sales department receives the benefit of free service, and consequently it should pay for it. Application of this reasoning to a service station may take it out of the liability class.

Perhaps this seems like splitting hairs. At first glance, it wouldn't seem to make a great deal of difference what department was charged with the free service expense, as the net profits would not be changed. But it makes a considerable difference. In the first place, with this method of distribution, a dealer will probably find that the much-criticized service department is making a profit—that it isn't the black sheep of the business family. Further, the amount of money he is spending for free service in order to promote sales may open his eyes to the fact that he is spending too much money in this way. He may find it advisable to revise some of his selling policies in order to effect a reduction in this expense.

This sort of analysis of the various phases of business is required if the distribution of costs is to be accurate and just. And the results obtained will help to operate your business to

the greatest advantage. Cost figures obtained as a result of such analysis, will enable the dealer to effect reduction in operating expenses where they are too high, and to prepare plans for increasing the profits of all departments.

Accurate cost records are also required within the service department. The work performed by this division consists of many repair jobs, and a detailed record of all labor and material on each individual job should be made. Only in this way can reasonable charges be made, and in case of a complaint, it is a simple matter to show the customer how his money was spent. This will reduce the losses due to rebates. In addition it is a check on the efficiency of employees.

Every business has bad debts. Experience tells every business man that, on the average, he can expect a certain percentage of his accounts receivable to be uncollectible. It is a mistake to consider such accounts as assets, yet they must be carried

along until it is certain that they will not be paid. By establishing a reserve to cover these bad debts, the periodical statement of the business does not show anything but actual assets. This is another thing that an accounting system will do, to give a man a correct perspective of his business.

Then again, suppose the dealer owns his building. He pays rent for it in the form of interest on his investment and the mortgages, and taxes. But these charges are paid annually or semi-annually. By prorating this expense for each month, and establishing a reserve to meet it, when the bills come due, the dealer is ready to pay them. Further, the profits of each month are shown in their correct amount, because the rent for each month is deducted from them. With no accounting system, it is unlikely that this phase would be considered at all.

Don't regard accounting as non-productive. Of course, it doesn't make money in the sense that your car sales department does. But it will save money for you. It will help you make your business more profitable.

Remember:

"A PENNY SAVED IS A PENNY EARNED."

Why I Believe We Have A GOOD DEALER CONTRACT and A FAIR POLICY

An authorized interview with Hal T. Boulden, Vice-President and sales director of the Selden Truck Corp., Rochester, N. Y., by Ray W. Sherman, executive editor of the Class Journal papers

IN its investigation of dealer contracts Motor World found that the Selden Truck Corp. of Rochester had worked out a contract and policy which seemed to answer most of the objections raised by dealers to the contracts and policies that have been common in the industry. It seemed that public knowledge of this contract and policy would crystallize opinion and answer many of the queries as to what can be done to make contracts and policies more equitable. Believing that more equitable relations are inevitable and must come before the industry can realize its maximum progress, Motor World suggested to Mr. Boulden that the results of his study be given publicity in the interest of the trade and industry as a whole, and what follows is Mr. Boulden's own story of his and his company's conclusions. The contract is printed in italics, with Mr. Boulden's comment following each clause, telling why each clause was written and how it operates under the company's policy.

WE have founded the Selden business on the principle that a dealer who does not make money is of no value whatsoever to himself or to the factory he represents. For that reason we have endeavored to formulate a policy and contract which will assure the dealer a prosperous and permanent business; in all phases of our enterprise we have endeavored to establish equitable relations.

The selling of our merchandise is a two-sided work in which the dealer is interested fully as much as we are, and we realize that our interest in the enterprise can best be promoted by assuring the dealer such conditions that he can sell a volume of merchandise at a profit to himself.

We realize that no contract can be stronger than the people behind it—on both sides.

We do not believe that the greatest success of a factory lies in the production of a maximum volume of cars or trucks, regardless of what the sales conditions in the field may be. We believe the market cannot absorb more than a certain quantity and that our success lies in gaging our production in proportion to conditions in the market, which, in other words, is simply the ability of the dealer to sell.

We do, however, study the field and have very definite ideas as to how many trucks a certain territory should take in any given year, providing conditions are normal. We endeavor to assist a dealer in developing what we consider a good business for his territory, but do not include in our contract relations any schedule calling for the taking of a certain number of trucks at any given month in any given year.

Our contract with the dealer also is perpetual. It is not renewable on a year to year basis. Once it has been signed, it stands forever, as long as the dealer and ourselves are able to work in harmony.

To provide that harmony we have set up an organization which we believe is successful in eliminating many of the unsatisfactory conditions which until now has existed in relations between dealer and factory. We have created a governmental machinery consisting of the general sales director, a

division sales managers' conference, and an advisory council. The division sales managers' conference is somewhat like the senate of the United States in some respects. It is made up of the company's employees who are in charge of various sales divisions. The advisory council is made up of a dealer from each of the seventeen sales divisions, who is elected yearly by the dealers in that division.

This machinery makes it possible for us to get a broad expression of opinion on any matter which may come up. If any dispute arises between the division sales manager and a dealer, it is referred to the advisory council made up of seventeen dealers.

The cancellation clause in the contract has purposely been so written that every dealer is assured of fair and full hearing with ample time for consideration of the matter before a contract can be cancelled. Cancellation can only be for cause, and the governmental machinery we have set up has the determination as to whether the cause is adequate or not.

From the very beginning it has been the position of the Selden Truck Corporation that for it to be progressive and successful, its dealer organization must individually be of the successful type. There is no better barometer by which the progress of the factory can be measured than by the degree of success of its dealer organization.

Realizing this the company naturally realizes that the dealer's success depends a great deal upon the ability of the dealer's salesman. If it is true that the factory's success is dependent upon these things, then the factory is certainly responsible for their condition, from which comes the fact that if the salesman of the dealer can be taught to sell properly the results are assured.

We do not believe we are selling trucks. We consider that we are selling transportation and we would rather not have an order for a truck than to have a truck perform a service for which it is not fitted. For that purpose we maintain a school at the factory and teach the dealer and the dealer's salesman how properly to sell and install transportation at a profit both

to the dealer and to the buyer of the transportation. We have adopted the slogan: "You can't buy a Selden truck until we can show you the need."

Salesmen who are graduated from our school have studied a three weeks' course with a post-graduate course in the fourth week. When a salesman completes the course, passing with an average of 85 per cent or better, he receives a diploma attached to which are four coupons. This diploma sends him back home as a 100 per cent salesman, as each of the coupons is of 25 per cent value. If after finishing the school he makes an improper installation and sells a truck to a user who has no use for it, or sells a truck that does not fit the user's need, the salesman is required to tear off one of these coupons and return it to the factory. He is then only a 75 per cent salesman. When he loses three coupons he is asked to come back to the factory and go through the school again. A salesman having graduated from the school may make mistakes, but the course equips him so that the dealer does not have to experiment a long time and suspend him after the dealer has invested in him a large drawing account.

While the big portion of the dealer's business is selling and merchandising transportation in connection with the use of motor trucks, still the factory appreciates that the dealer must keep a certain number of accounts in order to, at all times, have his business in such condition as to know whether he is succeeding and making money or not. We have traveling auditors who are trained in the essential accounts that are necessary for the dealer to keep without making it necessary for the dealer to maintain a large accounting department. These traveling auditors visit our different dealers, offering them the services of installing and maintaining such systems as will permit the dealer quickly to ascertain any losses or leaks and to overcome any business operation which is not profitable to the dealer.

I do not mind saying to you frankly, that it is my belief that the present position in the motor truck industry enjoyed by the Selden Truck Corp. is due to a great extent to its realizing the value of the dealer to the factory, and to its unending effort to create and maintain the closest co-operation between the dealer and the factory. And we have a vitally selfish interest when we desire the dealer organization to do business at a profit.

Often I have said that we would rather have our dealers sell a fewer number of trucks and at the end of a period see that they had made money out of our product than to have them sell a large number of trucks and have no money profit left. The factory that deals with its dealers with the dealer's position uppermost in its consideration is not only liberal but very selfish, because no factory can constructively progress without a dealer organization that is making money constantly.

The Selden Contract

THIS AGREEMENT, made this day of 19....., between the SELDEN TRUCK CORPORATION, of ROCHESTER, N. Y., a corporation organized and existing under the laws of the State of New York, hereinafter called the Company, and of hereinafter called the Dealer.

1—The Territory

WITNESSETH: 1. Subject to the conditions herein expressed the Company hereby grants to the Dealer the right, during the continuance of this Agreement, to purchase from the Company Motor Trucks

of its make for re-sale by the Dealer within the following described territory, and none other, to wit:

..... with headquarters at Street, City State

We divide the United States into zones. On each zone we place a sales valuation based on what we consider is the possible number of truck sales in that territory. In determining the valuation of a territory we take into consideration population, general conditions, as well as other factors. Our sales estimates and the results which we think can be secured from a territory are always based on the assumption that the territory is to be worked by the dealer. Activity and the effort on his part constitute the biggest portion of our consideration.

2—Estimating Sales Growth

2. It being agreed, the continuation of this agreement is a valuable asset to the Dealer, and as a basis for continuation from year to year, the Dealer agrees that trucks is the minimum number which should be absorbed by above described territory within the twelve months following date hereof, and Dealer further agrees that this territory should show an increase in actual number of trucks sold of at least 10 per cent per year.

The contract is perpetual. It has no date of termination and runs forever as long as the dealer and the factory can work in harmony. You will note in paragraph No. 2 that provision is made for a certain number of trucks. This number, however, is not a part of the contract, being simply an estimate as to what the dealer thinks his territory will take. When we sit down to make a contract with the dealer, we ask him how many trucks he thinks the territory will take. Let us assume that we have placed the figure at 125. Perhaps a dealer says that this is not enough, or perhaps he may say it is too much. In any event we get together and arrive at a figure which both of us consider safe and, invariably, if a dealer's estimate is lower than ours, we take the dealer's estimate. We endeavor to arrive at a figure which the dealer thinks is fair, and we will always take his first year estimate, if it does not vary more than 40 per cent from ours.

If the variation is not more than 40 per cent we analyze the territory along vocational lines and arrive at a decision. The provision of a 10 per cent increase in sales a year is not unfair as, believing our dealer organization to be the backbone of our business, they must increase sales yearly to be successful, and for us to be successful it is necessary that they be successful.

The greatest asset of the factory is territory, and if it is tied up with an unproductive dealer the factory has lost its greatest asset. Territory tied to an unprogressive dealer will not produce business that should be had, either for the dealer or for the factory.

Any dealership which cannot produce an increase of only 10 per cent a year is not progressing in a degree that it should. If at the end of the year period there is any question or disagreement as to the estimate for the following year the matter is referred to the sales director, and then, if he cannot agree with the dealer's views, the matter is referred to the Selden advisory council and other machinery previously described for adjustment of matters of this kind.

Machinery for Arbitration

This advisory council meets at the factory twice a year at the expense of the company and considers not only all questions that have remained unsettled but the advice and suggested criticism on all matters pertaining to the business relations

The Man Who Wrote the Contract and Policy



HAL T. BOULDEN

Vice-president and sales director of the Selden Truck Corp., Rochester. He has been in the industry for about ten years, having been a dealer, then with the Chase truck factory in Syracuse, and for several years in his present position at the Selden factory, with one eye on today and the other looking years ahead

between the factory and the dealer. Findings of the council are passed on to the division sales managers' conference, and by that body to our executive committee of which our president is the presiding officer.

3—Estimating Year's Sales

3. The Dealer estimates his requirements of the number of trucks of the various Models manufactured by the Company for each of the three month periods of the year to be as follows, and agrees to give the Company a new estimate every twelve months from the date hereof, that this agreement remains in force.

Units	Jan.,	Apr.,	July,	Oct.,
	Feb., Mar.	May, June	Aug., Sept.	Nov., Dec.
Unit No. 2.				
Unit No. 3.				
Unit No. 4.				
Unit No. 5.				
Total				

Realizing that forcing our product through the hands of a dealer builds for destruction rather than successful expansion, the dealer is purposely not required to buy a certain number of trucks. The number specified in paragraph 3 is the dealer's estimate, to enable the factory to produce so that it will be somewhere in accordance with the estimated needs of its dealer organization. If we can aid the dealer to sell trucks at a profit and to increase his business from year to year we consider that we have placed under our company a foundation that is stronger than any foundation that could be built by producing in large quantities and forcing the dealers to take more than they believe they can sell, some of which might have to be sold at a loss to the dealer and to the great injury of the Selden name.

4—Method of Ordering

4. The Dealer agrees to furnish the Company with detailed specifications of each truck ordered on regular order blank form to be supplied by the Company. Further, that all deliveries hereunder shall be subject to prior orders, and to delays caused by fires, strikes, U. S. Government requirements, conditions of labor and material market, and other causes beyond the control of the company.

This is simply a standard paragraph that needs little explanation.

5—Discounts and Prices

5. The Company agrees to allow the Dealer a discount of per cent on all truck chassis sold and delivered to the Dealer, to be deducted from the catalogue or prevailing list price at time of shipment. In the event that the Company shall change the list prices of its trucks the Dealer may, if he so desires, cancel any orders for trucks the prices of which shall be affected by such change.

In paragraph 5 we give the dealer absolute protection that all trucks ordered by him will not be shipped to him without his having an understanding of what the price is at the time of shipment. If the price is increased by the factory the dealer may cancel any orders remaining unshipped at the time of the price increase. If there is a reduction in prices he is given the benefit of the reduction on all unfilled or unshipped orders. Last year, when we reduced the price, we gave to every dealer a rebate when he showed us that he had sold the truck to the consumer after the reduction of price went into effect, even though shipment of the truck was made from the factory previous to the notification of price reduction. We believe it best to withhold this rebate until the truck is actually sold to the consumer so that there would be greater assurance that the rebate was benefiting the consumer as well as the dealer.

6—Deposits

6. All prices to be f.o.b. factory, Rochester, N. Y. A deposit of \$..... per truck must accompany each shipping specification, with the understanding that this deposit shall be held by the Company as a guarantee that the Dealer will take the motor truck or trucks ordered, and for the fulfillment of the provisions of this agreement. The balance of the purchase price not covered by the application of deposit as aforesaid, in each case shall be paid by the Dealer upon receipt of notice from the Company that the truck or trucks are ready for shipment, or on sight draft with bill of lading attached. It is further agreed that any deposits or funds due the Dealer at the termination of this agreement can be held by the Company until such time as the Dealer has paid in full his indebtedness to the Company. All deposit checks, and checks drawn to pay indebtedness to the Company must be drawn in favor of the Selden Truck Corporation.

No deposit based upon a contracted number of trucks is required on this contract. In order to have the dealer's capital

remain in his hands for use in sales efforts a deposit on each order sufficient to cover freight is the only deposit required and this deposit is always deducted from each invoice as shipment is made.

7—Parts Accounts

7. The Company agrees to allow the Dealer a discount of per cent from the prevailing list prices of such integral parts essential to the Selden Truck, as the Dealer may from time to time purchase, except such parts or bodies as are listed at net price. The Company will allow the Dealer a cash discount of 5 per cent from the net prices of all integral parts purchased hereunder, provided payment is made on or before the fifteenth day of the month, for all shipments made during the preceding month. Unless parts accounts are so promptly settled, or in the absence of a sufficient deposit with the Company to secure same, all parts will be shipped to the Dealer C. O. D. or Company may require cash payment in advance. Dealer's right to purchase all parts from Company shall not be an exclusive right. No deductions shall be made by Dealer from remittance for merchandise returned, or other claims, until receipt from Company of a credit memorandum therefor.

Service parts will be shipped to dealers if they have a credit rating with us. If a dealer fails to live up to his credit obligation, however, he immediately goes on to a C. O. D. basis. Just as this enables the company to keep its finances up to date, it also requires and necessitates that the dealer see to the collection of his own bills and keep his own finances always in good condition.

In case the company sells parts direct into the dealer's territory—which is covered by the statement that the dealer's rights on parts is not exclusive—any commission on parts so sold is remitted direct to the dealer. This right is reserved by the company so that the refusal of a disgruntled customer to have dealings with a dealer or the dealer's lack of stock of certain parts will never cause the user to be without service. The clause is simply a protective measure and the dealer is always protected by our plan of giving him a commission on all parts so sold.

8—For Failure to Deliver

8. The Dealer hereby agrees that the Company's liability for failure to deliver trucks under this agreement shall be limited to the repayment to the Dealer of such part of the purchase price as he may have paid the Company.

This is a standard clause in all contracts and, we believe, is equitable.

9—Loss and Damage

9. The responsibility of the Company for any and all loss or damage, shall cease upon the delivery of trucks or other goods to the Dealer, his representative or any common carrier.

This paragraph is standard.

10—Defective Parts

10. All defective parts returned for credit to be handled in accordance with the terms as outlined in the Warranty.

Purposely we have reduced this paragraph to as few words as possible basing it entirely upon the standard warranty which is printed on the back of the contract.

11—Territorial Protection

11. The Company further agrees: Not to enter into any agreement with any other party during the continuance of this agreement for the sale of new Selden trucks within the territory named; that they will not sell or solicit orders for new Selden trucks in said territory in accordance with the terms of this agreement while in force, and that all inquiries received from said territory will be referred to the Dealer.

This paragraph requires no comments. It explains itself.

12a—Not an Exclusive Agency

12. The Dealer further agrees: (a) That before entering into an agreement to sell any competing make of trucks, he will obtain the Company's written consent.

In line with the one thought carried in making this perpetual contract for the benefit and betterment of the dealer, this clause (a) has been inserted with the thought of not preventing the dealer from selling any other truck, but to make it first necessary that the dealer consult with the factory before taking on a competing line in an endeavor to analyze whether such a move on the part of the dealer will be more profitable to him or would divide his efforts and, therefore, decrease his

results by splitting them up and making the total results less than if the same effort were put on one individual line.

12b—One Demonstrator

(b) During the term of this agreement to keep in stock for exhibition and demonstration purposes, at least one Selden truck.

As said in the beginning, it never has been the policy of the Selden Truck Corporation to "load up" its dealers by forcing them to take more trucks than they can sell. In this clause (b) of the agreement we have purposely included in the contract this provision for the welfare of the dealer because a purchaser of a motor truck wants to see what he is buying and with our line the different features such as flexibility, etc., while explainable are more readily saleable by visual demonstration. In other words, this paragraph requires the dealer to have one chassis for show purposes only, because that increases his selling ability.

12c—Displaying and Selling

(c) To give Selden trucks equal representation with any other vehicles sold by him and to faithfully represent and judiciously advertise and make all reasonable effort to sell the trucks made by the Company.

Paragraph (c) explains itself and is, we believe, fair.

12d—Furnishing Sales Data

(d) To furnish to the Company the names and addresses of all purchasers of Selden trucks sold in the territory covered by this contract, together with the models and factory numbers of said trucks, as soon as such sales shall be made; also to supply such other data covering conditions in the territory as may be requested from time to time.

The real interest of the factory is in its truck after the truck is placed in the hands of the user, because the factory's reputation comes from the performance of its product, which is the reason in the contract that the dealer is to furnish the company with the names and addresses of all purchasers of Selden trucks.

This information has always been difficult to procure, probably because of the attitude of the average dealer that his efforts have been concluded when the sale has been made. Therefore, the factory attaches a card certificate to each truck as it is shipped, which must not be removed until the truck is sold, and when the dealer has this card certificate filled out and signed by the purchaser with the information asked on it the factory sends the dealer \$5 upon receipt of the card at the factory.

When this card is received the factory immediately writes the user, acknowledging his purchase, and assures him of the factory's direct interest in his truck and offers to him monthly inspection and a cost system for keeping detailed analysis of the cost of operation of his truck.

12e—Monthly Inspection

(e) To give all Selden trucks in his territory monthly inspection, using the Selden National Monthly Inspection System and forms provided by the Company or some similar system (having the approval of the Company), sending the Company a copy of each inspection, and to maintain a properly equipped Service Station, in which he will render service to Selden users at reasonable market prices.

The Selden National Monthly Inspection System provides for monthly inspection of the trucks in the dealer's territory. This is done on a system of inspection forms which we have devised and which we furnish the dealer free of all cost. When the dealer makes the inspection, one copy of the inspection report goes to the owner of the truck, one to the driver, the dealer retains one and one is sent to the chief inspector of the company at the factory. All inspections are made for users free of charge, but any and all service work in connection with or in addition is paid for by the owner of the truck.

12f—Parts Stock

(f) To maintain at all times a stock of repair parts for Selden trucks as recommended by the Service Department of the Company, which will be based upon the number of trucks in operation in the territory herein specified; said stock of parts to be ordered with the initial order for trucks.

We have found that if the dealer will leave the assortment of repair parts for his stock to the judgment of our service department an average of \$18 worth of service parts per truck

is sufficient stock and that on such a basis the dealer can give proper service and make money while doing it. In order to encourage the dealer to carry the necessary stock of service parts the factory is always ready to take back any new and unused parts from the dealer.

In case of a new dealer in a territory which has been covered by previous dealer representation, the requirements of service parts for the new dealer are based on the number of trucks in operation in the territory as taken from the factory owners' list. We have compiled repair parts stock lists in Class A, Class B and Class C. These range from territories having 200 trucks to the lowest, a Class C territory, having 25 trucks or less. In operating this plan a dealer is enabled to maintain a sufficient stock of repair parts at a minimum of investment on his part and to keep it turning over rapidly.

12g—Working the Territory

(g) To appoint associate dealers or arrange other satisfactory representation in all important cities and towns in his territory, within a reasonable length of time. If the Dealer fails, within a reasonable time, to secure such representation in any part of his territory the Company reserves the right to withdraw such places from the Dealer's territory or to sell direct in such places without profit to the Dealer.

In binding itself to the dealer by a perpetual contract, the factory is giving away its most valuable asset, which is the territory. This asset is valuable only in the amount of business that is obtained for the factory's product. Therefore, if the dealer appoints associate dealers in the towns which should have associate dealers and works with them in the same manner as the factory works with the dealer, the dealer and the factory will get their share of the business that the territory produces. If the dealer neglects to work this territory and to appoint associate dealers at points where they should be, there then should be no objection on his part to the factory's withdrawal of such territory from his contract and working direct.

While this clause in the contract contains the word "reasonable," which is more or less indefinite, the thought behind the contract as a whole is only that successful dealers make success for the factory. And the provision of the Selden advisory council for taking care of any questions which may arise, such as is covered by this paragraph, makes it obligatory on the part of the dealer to produce the business that is available.

12h—Triplicate Agreements

(h) In appointing associate dealers in above specified territory, the Dealer to execute an agreement in triplicate on forms provided by the Company for that purpose, one copy of which is to be filed with the Company.

By having a copy of the associate contract, the factory is placed in position of knowing the basis on which the associate dealer works with the direct dealer and is enabled to make rush shipments direct to the associate dealer at his discount and at the same time protect the direct dealer with his proper discount. Also, associate dealers are put on the factory mailing list to receive regularly all supplies of any new literature and mailings of data pertaining to sales and service.

13—Limitation of Authority

13. It is understood that this agreement shall not in any respect make the Dealer the agent of the Company to transact any business in his name or for him in any form, nor in the Company's name nor upon his behalf to make any promises or representations, except as the Company shall have given written authority so to do, it being intended by this agreement simply to give the Dealer the right to sell Selden trucks in the territory herein specified.

This is a standard clause, which is quite plain.

14—Advertising

14. ADVERTISING—Advertising in National Mediums will be at the Company's expense. Local mediums, such as newspapers and painted bulletins, should be used by the Dealer, the selection of mediums and copy used, to be approved by the Company. Such advertising is to be placed and paid for by the Dealer. Original receipted bills together with page copies of ads or photographs of bulletins, must be submitted by the Dealer within thirty days from date of invoice, at which time the Company will remit for one-half the total cost, providing this total cost does not exceed twenty-five dollars (\$25) per truck taken by the Dealer. All advertising must be of Selden Motor Trucks exclusively.

Realizing that advertising is not only necessary but greatly

beneficial, the company's policy is to go 50-50 with the dealer on all kinds of advertising.

Of course, advertising in national mediums is a subject that cannot very well be divided into different dealer benefits and so the company stands the total expense of all national medium advertising.

The policy of the company in this connection is founded on its desire to give the dealer great leeway in the handling of advertising activities in his own territory. The company supplies a book of advertisements, which are all prepared for the dealer, but the dealer may make up his own copy, or do anything that he wishes, so long as what he runs is submitted to the company for its approval. This feature of company approval is maintained because it has been our experience that overenthusiastic dealers sometimes make over-drawn statements which weaken the advertising and do not build for a good name and reputation for the company or the dealer. The position of the company in this connection is not restrictive but simply that the dealer may have the full co-operation of the ability of the company's advertising department. The advertising department will even go further, in that it very often writes special advertisements for the dealer without cost to him for such services.

In order that the dealer may have full control over his local advertising, he is permitted to contract for whatever advertising he does, paying the bills for the same and the only requirement we make of him is that, in submitting his advertising to us for payment of our share, he attach to the request a copy of the page showing advertisement together with a receipted bill, when the company will at once remit to him for their portion.

15—The Firm Name

15. The Company is the sole owner of the word "SELDEN" as applied to motor vehicles and the good will attached thereto. The Dealer agrees that he will not use any of the several copyrighted names owned by the Selden Truck Corporation as a part of the style or corporate title under which he transacts business, nor will he use the word "SELDEN" without written permission of the Selden Truck Corporation. On termination of this contract, at the request of the Selden Truck Corporation, the Dealer agrees to discontinue the use of the word "SELDEN" on any signs used or displayed by Dealer, or on any advertising matter issued by him, and thereafter, will not use directly or indirectly in connection with any motor vehicle business the word "SELDEN" or any other name, title or expression so nearly resembling the same, so as to deceive the public.

It has been the disposition of the average dealer to think that the advertising benefits received from incorporating in his firm name the name of the product he handles brought him results. Fundamentally a dealer is spending his money and his time in building up a firm name and if the word Selden is incorporated the result is that he is not building himself and his business in the minds of the motor truck using public in a local way. If he builds his business successfully it must be on the service he renders and his local connection and, though the name of the product he handles is not included in the title of his concern, the product itself very soon identifies him with the product and the product with him.

Another feature which is not an advantage to the dealer in his use of the name of the factory is that, should he ever change the line he handles, having the name of the factory in his firm name would cause complications.

16—National Sales

16. (A) The Company reserves the right to sell trucks direct to the United States Government and without profit to the Dealer. (B) To sell to Corporations and Companies known as National Buyers for operation into the Dealer's territory. (C) On trucks sold at special prices to National Buyers (so classified by the Company) maintaining Purchasing Departments in any large center, for delivery to their various Branches throughout the Country, it is understood and agreed that a commission of 5 per cent for servicing and handling shall be paid to the Dealer into whose territory the truck or trucks are sent for operation, in place of the commission or discount granted the Dealer under the terms of this agreement.

Successful handling of national business requires a certain amount of service on the part of the dealer and the dealer is entitled to a commission no matter on what basis the national business is sold and, therefore, we believe that 5 per cent commission should go to the dealer in whose territory the truck is to be used.

17—Territorial Infringement

17. It is further agreed that the Dealer will not under any circumstances, directly or indirectly, sell or offer for sale any new Selden truck or trucks in territory other than is herein specified. If within 90 days after the sale of the truck or trucks in the above allotted territory, the truck or trucks thus sold should be sent for permanent use or residence into territory, outside of that described herein, the Dealer making said sale shall pay to the Dealer in whose territory the truck or trucks are thus sent, 15 per cent of the list price in effect at the time of sale. Should any dispute arise between Dealers concerning sales alleged to be within the provision of this paragraph, and the Dealers do not amicably adjust such dispute, then such dispute shall be submitted to the Sales Director of the Selden Truck Corporation for determination and his findings shall be conclusive and binding upon both Dealers.

Infringement of territory on the part of one dealer on another has been an almost impossible situation to handle and, therefore, we believe that no matter what the conditions of the sale may be, if a truck is sold in one territory and used in another territory a commission of 15 per cent of the list price is due the dealer into whose territory the truck is finally delivered for operation.

This feature also acts to influence the dealer to maintain the full price in that an infringing dealer who has sold a truck into another territory at less than list price loses still more than what he has cut, because he must pay 15 per cent of the list price—and not of the price for which he sold the truck—to the dealer into whose territory the truck goes, thus tending to prevent sales at small or no profit when trucks are to be used in other than the dealer's territory.

18—Cancellation Clause

18. This agreement shall remain in force until terminated by either party giving fifteen (15) days written notice setting forth sufficient and just reasons therefor; furthermore, any violation of the terms of this agreement by either party shall be deemed sufficient cause for cancellation. It is understood, however, that cancellation on the part of the Company will not be made until the Dealer has first had the opportunity of being heard and should the Dealer desire he must within fifteen (15) days present his reasons why cancellation should not be made. Said cancellation shall also operate for all orders for trucks or parts which may have been received by the Company prior to such cancellation, but shall not operate as a cancellation of any indebtedness due the Company from the Dealer. In the event of cancellation the Company reserves the right, at its option, to purchase, and the Dealer agrees to sell to the Company, all new and unused Selden trucks, or parts, the property of, or in the possession of the Dealer, less a 5 per cent handling charge on parts. Such trucks or parts are to be immediately delivered over to the Company should it exercise such option. The Company reserves the right to refuse to accept obsolete parts.

While this clause may be taken as a cancellation clause its specific statement that there must be violation of the terms of the agreement or sufficient and just reasons for cancellation takes away the usual "over-night" cancellation provision. Of course, the power naturally rests with the sales director, but the conditions of this paragraph are such that he is compelled to be absolutely fair in his decisions.

No territorial representative of the company has any right to cancel a contract.

If the representative has any grievances against the dealer he must prefer charges in writing in the regular way. The charges are then referred by the sales director to the dealer, who is entitled to a hearing.

This action develops both sides of the question and absolutely prevents any hasty cancellation of the contract.

In case the information developed is of such a nature as to prevent an agreement, all the facts are then submitted to the ADVISORY COUNCIL, made up of seventeen dealers. Not only do these seventeen dealers consider and pass upon the differences of opinion, but, after they have finished, their conclusions are submitted to the DIVISION SALES MANAGERS' CONFERENCE, composed of all of the company's division sales managers, who in turn submit their findings to the SALES DIRECTOR.

By the time all of this machinery has operated on the question, it is practically impossible for it to be settled in any way which is not fair to both parties to the contract.

Clauses 19, 20 and 21

19. That after the termination of this agreement for cause as above described, the continuance of the sale of such motor trucks

or the referring of inquiries by the Company to the Dealer shall not be construed as a renewal of this agreement, but all orders accepted by the Company and all sales made by the Dealer after such termination of this agreement shall be governed by the terms and conditions thereof.

20. It is further agreed that this contract is non-assignable and non-transferable unless the Dealer has secured the written consent of the Company, and that if the Dealer shall discontinue business, or become insolvent, or become incapacitated, deceased or be dissolved, this agreement shall become terminated.

21. THIS AGREEMENT SHALL NOT BE VALID UNTIL ACCEPTED BY A DULY AUTHORIZED OFFICER OF THE SELDEN TRUCK CORPORATION, AT ITS HOME OFFICE, ROCHESTER, N. Y.

Paragraphs 19, 20 and 21 explain themselves.

The Warranty

"WE warrant the new motor trucks manufactured by us to be free from defects in material and workmanship, this warranty being limited to making good at our factory any part or parts thereof which shall within 90 days after delivery of the truck to the original purchaser, be returned to us with the transportation charges prepaid, and which our examination shall disclose to our satisfaction to

have been thus defective. A claim report must accompany each shipment of returned goods for credit.

"The warranty shall not apply to any truck which shall have been repaired or altered outside of our factory, in any way so as, in our judgment, to affect its stability or reliability, nor to any truck which has been operated at a speed exceeding the factory rated speed, or loaded beyond the factory rated load capacity, or which has been the subject of other misuse, negligence or accident.

"We make no warranty whatever in respect to tires, rims, ignition apparatus, lamps, gas tanks, signaling devices, generators, batteries or other trade accessories, inasmuch as they are usually warranted separately by their respective manufacturers.

"The foregoing obligation to make good any defective parts returned as herein provided is in lieu of all other warranties express or implied, and of all other obligations or liabilities on our part, and we neither assume nor authorize any other person to assume for us any other liability in connection with the sale of our trucks."

The Warranty in the contract is a standard warranty used by all manufacturers and needs no comment because it is the result of deliberations on the part of those connected with the industry to procure a warranty which will be fair and just to everybody concerned.

Your Opinion, Please!

IN order that the greatest amount of information concerning the dealer's contract may be assembled, Motor World requests dealers to forward their views on the subject at once. The contract that is printed here furnishes the first opportunity that has been given in the history of the trade for a general public perusal of a contract and discussion of the subject. Comment from many dealers **MUST** be had before it can be determined just what are the ideal contract and policy. There is not a single dealer who has not an opinion on this subject, and the expression of these opinions **NOW** will prove of value to the trade. That this expression of opinion may cover certain important points Motor World requests answers to the following questions:

- 1—Is the Selden contract, in your opinion, fair to both parties?
- 2—Is the policy fair to both parties?
- 3—If you believe the contract could be improved, state how. Be explicit.
- 4—If you believe the policy could be improved, state how. Be explicit.
- 5—If any points should be omitted or inserted, or if you have any other suggestions to offer, please so state.

In gathering this information Motor World realizes that those dealers who express opinions do so in the confidence that their names will not be used and this confidence will be fully respected.

That Priceless Business Asset— Public Opinion

*A Story of How the Memphis Dealers Are Building Public
Confidence Through Association Effort*

WHEN a body of business men organizes to advance its trade and then spends thousands of dollars for the benefit of its patrons, it indicates two things—1. That those business men have learned the principle of service and realize that they must give in order to receive, and; 2. That they realize that the prosperity of their own line of industry depends upon the well-being of that portion of the public who form their clientele.

That is what the Memphis Automobile Dealers' Association has done. The money has been spent in a broad and comprehensive publicity campaign.

tial dealers of Memphis, and therefore feels itself obligated to keep the automobile business upon a high ethical plane. It realizes that satisfaction must be given the user of its product. Therefore, it feels bound to assist him in the selection and care of a car, and to point out for him where and how to buy good values from reliable firms.

There is no spirit of jealousy among the members of the Association. They take the position that what applies to high class dealing is applicable to each of them alike; that the automobile industry must be fixed firmly in the public mind as one of the leading businesses of the country to-day,

Association published on the subject of good will.

"Public Opinion as a Priceless Asset of All Business" was the headline. The advertisement said in substance:

"Modern business places a premium on the integrity of men and corporations. It is that favor or advantages which a business acquires beyond the mere value of what it sells—an intangible asset bestowed by public opinion. It is called good will, and it is priceless.

"A business built on price alone enjoys no insurance against the fire of competition. As an asset the good will of such a business is worth but little. It is as hazardous a venture as a horse race.

"On the other hand a business or product based on recognized quality and fair price is as solidly founded as the Rock of Gibraltar. Its good will is an asset valued as a profitable investment.

"What constitutes good will in an automobile business? Just this: The high esteem in which public opinion holds the business as a contributing factor in the country's prosperity—the respect with which public opinion regards a business conducted solely along lines which will not give rise to questions of value or good faith—the recognition of an honest effort to maintain a square deal policy.

"Pledged to these truths there is a pleasure in telling you of them, because as George Bernard Shaw says: 'It is only the man who has no message who is too fastidious to beat the drum at the door of his booth.'"

A body of men willing to spend real money in hard times to win the good-will of their patrons are certainly wise enough to hold that good-will by backing up their promises with fair dealing, enterprising business methods, and efficient service.

That the members of the Memphis Automobile Dealers Association are holding the good-will of their customers is rather convincingly demonstrated by the fact that the automobile business of Memphis has grown from a very small enterprise five years ago to one of the three biggest in the city to-day. And it is growing all of the time.

"Pledged to Do Business on the Square"

The Master of Time
Wherein Science Has Again Come to Humanity's Rescue
"Believe me, your Time is not your own!"
Old stuff? Yes, but as applicable to the present day as to the past. For Time was and always will be paramount.
To save Time the ox gave way to the mechanical plow—the clay tablet to the printed page—the fleet-running messenger to the telegraph—the literacy to learning and the horse to the automobile.
Born of necessity the automobile has scored heavily for progress. It has reduced miles to minutes, increased soil production—heightened recreation—united urban and suburban communities—promoted health—advanced education—and reclaimed millions of lost industrial hours.
And as an economic factor in transportation its value is unquestionable.
To save business, Time, therefore, is a key that these days, finds the lock-hole in the door of progressive commercialism. But be sure you find the right door!

Memphis Automobile Dealers' Association
"Pledged to Do Business on the Square"

Unity and the Public
Wherein Association Becomes a Potent Factor in Buying
In a length of rope are thousands of slender fibers. Individually they may be insignificant. But weave them together and you have the means for sustaining enormous weight.
Such is the result of cohesive association. As are the rope fibers so are the component units of commercial organization. In either the principle is the same.
It is the principle that ties individual effort with the finished product of the factory.
It is the principle reflected in the operatic triumph of a cast of stars.
It is the unity that in a commercial body begets public confidence.
It is OUR principle.
Assurance of a square deal through honest prices for honest quality and honest service are thus pledged.
They are the sole strands in the tie that binds each and every unit of membership. And for this reason.
Known value as indicated by established names backed by a record for service and performance is the potent factor in ALL buying.

Memphis Automobile Dealers' Asso.
"Pledged to Do Business on the Square"

These are samples of the advertisements inserted in local papers by the Memphis Automobile Dealers Association in a timely and well-planned campaign to build public confidence

Service has been emphasized. In an equal degree, the fact has been stressed that the Association regards its mission as an ethical one. It represents the responsible and substan-

handling a vital commercial necessity.

Value of Good Will

The keynote of the series was perhaps sounded in the copy, which the

The Cold Water Test

A Reilly Story

By RAY W. SHERMAN



"THIS bird Ganzen is a pest!" declared Tommy Trumbull, manager for C. J. Reilly, Inc., which scattered Sennett cars in and about Callawassa. "I'd like to take him out and shoot him—sometimes."

"Pest? How come?" asked Reilly, who had given the company its name and original capital—and had hired Ganzen as business manager years before.

"Oh," explained Tommy, "he's just a pest. He never wants to do anything that anybody else wants to do. Every time you suggest anything he has some perfectly good reason why it can't be done. He's the darndest pessimist and wet blanket I ever saw. Outside of that he's all right."

Reilly smiled.

"I smile myself—sometimes," said Tommy. "Why—this morning I wanted to make a change in the style of our prospect cards and he had about a dozen reasons why it shouldn't be done."

"Which were what?"

"Well—there were two principal reasons. The first was that it wouldn't be any great advantage and the second was that it would mean junking a lot of cards and would cost a lot of money."

"Well, what are you going to do about it?" asked Reilly.

"Nothing," said Tommy. "I think he's right. But sometimes I don't see why you've kept him around here all these years."

"That's just the reason," Reilly replied.

"What?"

"Sometimes he's right." And Reilly laughingly continued: "You know, Tommy, I've had the same feeling you have about Ganzen many, many times. I've been tempted to let him go on a great many occasions. Once, I even had him looking for another job—and then I changed my mind."

"I know that Ganzen is a wet blanket, if that's the term you want to use, and I know he doesn't measure up to you in ideas and leadership and the things that are necessary for making a business GO. But he's a wonderful balance wheel. He can always see the other side of any proposition, and that's one reason why I've kept him around. He keeps me from going off half cocked. Whenever I want to know whether one of my pet ideas is good I try to sell it to Ganzen. He always comes across with a lot of cold water and gives me the other side of the question."

"And then you drop it?"

"Not so you could notice it!"

Reilly declared. "Having secured the OTHER side of the question I weigh both sides and make my decision on my own judgment. I'm perfectly capable of figuring out why a thing SHOULD be done, but I don't always get all the reasons why it should NOT be done until I ask Ganzen. And he surely can throw great gobs of cold water on anything. That's one reason why he never got to be more than office manager. He's not constructive. But he CAN do the things I tell him, and he is good on keeping expenses down."

When a Wet Blanket Is Useful

"You know, Tommy, it's always a good thing to have a wet blanket around. You often get sore and disgusted, but it pays in the long run. Furthermore, the man who can't stand a little cold water once in a while isn't battling one hundred per cent. If I couldn't function and still keep Ganzen here I'd think there was something the matter with me. It's always a good thing to have a little cold water thrown on yourself once in a while, and when I think some folks need it I dump a little around once in a while myself."

A bit of a smile flitted across Tommy's face, as it began to dawn upon him that maybe he had been given cold showers himself and had not realized what was going on.

"Yes," Reilly continued, "I've done it myself before now. I ALWAYS do it when I'm hiring a new man, particularly a salesman. I always tell him how hard the work is, how exacting we are, how hard it is to keep up with the rest of our organization, how discontented he may get and every other thing of the kind I can think of. And then I watch his reaction. If he agrees with me that perhaps he couldn't do the job I lose interest in him right away, because I know then he is not a plugger and a fighter."

"And every little while I throw a little cold water on some member of the organization. I poured a lot of it on young Georgie Roper. I used to douse him good and proper when he first came here—and I give him a bath once in a while even now. But he always comes back fighting. He seems to thrive on cold

water. Instead of wilting down and getting a case of shivers he just stands up and beams and a cold bath seems to make him grow a foot. It's fun to watch him—and it does him a lot of good."

"There are folks, Tommy, who can't stand any kind of criticism, or opposition, or anything of the kind. If things don't go just their way they figure on the easiest way out. They don't seem to realize that no man with an idea ever got away with it without encountering some opposition."

The Service Manager's Test

"Jack, the service manager, has overcome more opposition than any other man in the place. He has made our service station the best in the world, but he had to go through fire as well as cold water to make it so. He had to sell his own men on the idea first. And then he had to sell the rest of our organization, including the sales department. And then he had to sell the public. And after he had it sold he had to keep it sold, which was one of the hardest jobs in the whole lot. But do you suppose he wilted? Not for a minute. He just stood up under the shower of ice water and beamed and grew and thrived, until to-day he goes looking for trouble if things seem to be running too smoothly. Jack's some boy!"

"That's one of the greatest tests I know of, Tommy—plain cold water. Every man ought to have a good dose of it every now and then. It does him good. Any man can drift along when things go well. He can seem to be pretty good if he hasn't any obstacles to overcome, and he may never develop all his ability unless somebody chucks a few rocks on his way or douses him with cold water once in a while to give him a chance to cash in on his plus ability. It's great stuff, Tommy."

"Yes," said Tommy, "for external use."

Editorial Observation

Selling—the Part Contact Plays

A FEW weeks ago a manufacturer of wearing apparel whose market was centered in the Middle West ran into a severe slump. Trip after trip his salesmen came back to headquarters with almost no sales. They brought the same old story—hard times and the merchants were not buying anything. The manufacturer sent his salesmen into another territory for a couple of weeks and instead of men sent small cases of sample goods by express to the merchants his men had been unable to sell. He received some orders, an encouraging number of orders—sold by these silent salesmen, samples of his goods.

The manufacturer brought his salesmen back from the other territory, where they hadn't sold any more than they did on their old stamping grounds, and questioned them about their trips, what merchants had said to them and what they had said to mer-

chants. It developed that they had been unable to inoculate themselves against pessimism. They had "caught" it and unconsciously had passed it on to their prospects, with the result that speechless samples had beaten them all hollow in making sales.

The story offers a moral regarding contacts—contacts between merchandiser and prospect. It suggests that many a merchandiser, whether he be manufacturer, distributor or retailer, needs to check up on his selling staff and determine whether it is maintaining the right sort of contact with his trade. Men capable of holding themselves above passing conditions, men with power to influence others to buy—not what they don't want but what they may for the moment merely think they don't want—are the only men who belong in this era of competition in any selling organization.

Can your men sell as well as samples—or better?

Charge It!

NINETEEN TWENTY taught some automobile, truck and tractor dealers some sharp lessons about credit. Many dealers in the country, who ran open accounts for service and merchandise customers and were careless in making collections, found themselves, when farmers began to hoard instead of sell their crops last fall, without means of getting money to pay their own bills to manufacturers and jobbers. Cases have come to note where dealers let charges run for months without billing the customers concerned. And there were other instances where dealers actually declined to accommodate a farmer who came in to pay his bill, remarking, "I'm pretty busy now, Jim; let it go until the next time you come around." There was no next time, because Jim ran out of cash when he refused to sell his crops on a falling market.

Such cases as these demonstrate the necessity that business be put on a cash basis unless the dealer or garageman will maintain an accounting system which will enable him to collect with clocklike regularity from customers who are worthy of credit. The most honest and precise individual is not likely to think about a bill, much less pay it, until he gets notice that it is due and any system of charging accounts without an accompanying system of prompt and regular

billing is just a road to disaster. No business is too small to need an accounting system.

"WHY not offer a few prizes for new ways to tax autos?" Under this heading a Seattle paper in a short editorial discussed the way in which the automobile industry is made the butt of frenzied legislation, emphasizing particularly the unfairness of conditions in that section. The editorial continues: "With State and nation alike threatening to put a tax on gasoline; with Governor Hart asking for a special tax to be levied on all automobile drivers to pay the entire expenses of the proposed police; with the Federal Government charging a sales tax on every new flivver, and the State thereby collecting double taxation, assessing it as a personal property and also demanding a heavy license fee, it seems hardly necessary for the legislators to deliberately short-change the patient owners of motor vehicles by charging a 12-months' price for a 10-months' tax, but they did. The old familiar 'AAA' used to be a pretty decoration for the top of a radiator, but it isn't up to date in 1920. The proper emblem for the automobile owner of to-day is not a fragment of a nickel plated alphabet, but a small and modest image of a meek and well shorn goat."



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Hires Insurance Men to Sell Cars

"I **H**APPEN to be partial to life insurance men, when I hire new salesmen," said one of the officials of the Milwaukee Automobile Dealers Association. "I have been using 'blind' advertisements up to this time. I felt this would get me a better class of men, but I find I did not count on the fact that many good salesmen—the best, perhaps—hesitate about endangering their present position by answering 'blind' ads, showing no name. I found this out because I never once got a reply from an insurance salesman to my ads, and I asked one of them about it. He told me the life insurance men especially are timid about answering blind ads for salesmen, as many insurance companies and managers advertise for men, and keep off the subject of insurance entirely; some even advertise for men 'who can sell' an entirely foreign line, and then fix it up when the man has replied."

Watches Spare Tires for Prospects

A COLUMBUS tire dealer and repairer has capitalized the fact that spare tires are mostly carried on the rear of the car, by having attendants at gasoline filling stations report when spare tires are in bad shape. A small fee is given to the attendant to get the license number of the car, the make of the car and if possible the name of the owner of machine having defective spares. This information is taken and classified and a salesman calls on all owners to interest them in the purchase of a new tire or, if the case warrants, to have the tire repaired. A good deal of business has been secured by this method.

Visualizes His Address in Ads.

"**L**ARGE city dealers often forget to tell the people in their advertising and other publicity work just where they are located," remarked a Milwaukee automobile dealer, "and that is the reason why I not only give my number and

street address but tell about being located within three doors around the corner from the Majestic theater. Even

"Costless" Circular Pulls \$500 for Garageman

OFFICE OF
Wm. J. SMITH
GARAGE FERNWOOD SUPREME
5034 36 36 BAYVIEW AVE
PHILADELPHIA, PA.

In the operation of the Barker-Karpis gang, the largest robbery, Chicago men are planning an important part.

Six gallons of gasoline out of every ten gallons sold, are used for business purposes.

Six million automobiles in the United States. Two and three quarters million are used by farmers.

Three two and three quarter million automobiles travel over eleven million miles annually.

If all the automobiles in this country stopped operation for thirty days, the people of any large city, such as New York, Chicago, or Philadelphia would starve to death.

If all the garage men and automobile owners were to co-operate and adhere strictly to the law, there would be a percentage per cent less crime and accidents in this country.

It is the duty of every garage man to assist customers to economically operate his automobile. The four fundamental principles are—Good Maintenance, Good Oil, Good Tires and Good Care.

Garage Oil
1 quart \$1.00
1 gallon \$1.00

Washers
\$4.00, \$6.00

Parking Lamp
\$7.50

Best Tire Tires
and Tubes. Price as to size.

Good Tire repair
\$1.00, \$2.00

Cigar Lighter
\$6.00

Tires
\$2.00, \$3.00

Auto Polishes
\$1.00

Auto Accessories
1 gallon \$2.00

Does it pay for the garageman who sells accessories and tires to send out timely circulars to a selected list of customers? William J. Smith, proprietor of the Garage Fernwood Supreme, Philadelphia, thinks so.

Why wouldn't he? He tried it recently with the accompanying circular in imitation typewriting. The stationery and printing were furnished free of charge by the Goodrich Co. The circular was mailed to 500 customers and Smith's only expense was the postage. The returns exceeded \$500 in tires and a little more in accessories.

Why can't you do likewise?

the police and newspaper reporters can't often visualize the location if only the street address is given. This is particularly important, I think, to dealers located in outlying portions of the city and on the less-populated streets."

Sells Used Cars to Build Good Will

A COLUMBUS dealer has taken up a slightly different method of securing business for his line of cars by offering to sell the used car of a prospect for cash. The plan is to sell the car to a person in the market for a used car and after deducting a small percentage as commission turn the cash over to the owner. While there are no strings to the deal that make it necessary for the seller to purchase a car handled by the dealer, still a good deal of good will has resulted and in 85 per cent of the cases of that sort the seller has reinvested in his line after an investigation of a week or 10 days. A small commission is made to take care of the actual cost of the transaction.

Demonstrator Helps Sales

TO prove the merits of a new rim recently invented and now manufactured in the South, and its simplicity of operation, the King Hardware Company, of Atlanta, arranged a window display in which a young woman, working without tools, demonstrated how easily the rim can be changed by the average woman. A large clock was placed in the window to show with what speed the rim could be removed from a casing or replaced. Needless to state the display attracted wide attention, and one man was kept busy in the store's accessory department selling these rims to motorists during the period of the window display. Why not get a demonstrator into your window occasionally?

This SOLD Tire Chains

L-M Garage, Cleveland, hung six popular sizes of new tire chains from its electric street sign, with a poster announcing, "Here are your new tire chains, but they won't do you any good HERE—Jack applies them free this week." A hand pointed to the accessory department door. Salesman Stewart reported brisk sales every day during this special "chain week."

A Department of BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 182

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Smoothing Out Engine Running Through Better Balancing of Reciprocating Parts

THE problem of securing smooth running and perfect balance in an engine lies first of all in the correct manufacture. There are many cars running to-day with engines so noisy that it seems impossible that they hang together. Doubtless, much of this noise is due to loose bearings and other parts, but a good deal of it is also due to improper balance. Engineers in recent years have studied the problem of balance and the cars of good quality which have been turned out in the last five years are much better in this respect than the earlier ones.

If the service station is called upon to rebuild or repair one of these earlier engines, it would not seem to be worth while to go to any great expense or time in the matter of securing more quiet running unless this is taken up with the owner in advance. However, in the newer models of cars, the balancing of reciprocating parts should be watched very carefully in order to return the car to the owner in even as good condition as it was received in the station.

In the manufacture of the better grade cars, the pistons and connecting rods are assembled selectively. To make this plainer, the assembler has several hundred pistons on a bench. He weighs these up on scales and marks the weight on each one. He then selects, say four, that weigh within $\frac{1}{4}$ oz. of each other, or even closer, if the quality of the car demands it. Some of these groups may vary as much as 2 or 3 oz., but as long as all the pistons that are assembled into one engine are about the same weight, the pistons, at least, will balance.

As a rule, the same operations are gone through in the case of the connecting rods and finally, if the work is very high grade, the whole assembly will be weighed up for balance. With all this care in the original assembly, it happens many times, that in replacing one or more of these parts, the repairman pays no attention to these weights and assembles a piston or rod right from stock.

This new piston may have a different weight from the others and when the engine is assembled and tested, it will be found that it is out of balance and cannot be made to run smoothly.

The remedy for this is precaution in the first place. It takes but a few seconds to weigh up any of the parts on a spring balance as shown in Fig. 1 and mark them with chalk. If no pistons are found in stock which are the right weight, the heavy pistons should be reduced by taking out some of the metal. This can be done by turning out the inside of the skirt as shown in Fig. 2 or by drilling the skirt as shown in Fig. 3.

Balance of Rotating Parts

In addition to this balancing process, there is another balance that has considerable effect on the running of the engine and that is the balance of the

rotating parts. We may assume that the crankshaft itself is balanced perfectly, but if it is not, this can be determined by a crankshaft balancing device shown in Fig. 4. This will determine the static balance, as it is called, but will not determine the running balance. The crankshaft may be called in static balance when it does not come to rest with the same side at the bottom at all times. The running balance cannot be determined with ordinary shop equipment.

In connection with the balance of the rotating parts, the weight of the lower end of the connecting rod must be taken into consideration because this end has a strictly rotating movement, going around with the shaft. The part of the rod between the crank bearing and the wrist pin bearing, has a combination of both reciprocating and rotary motion and the correct balancing of the rod is de-

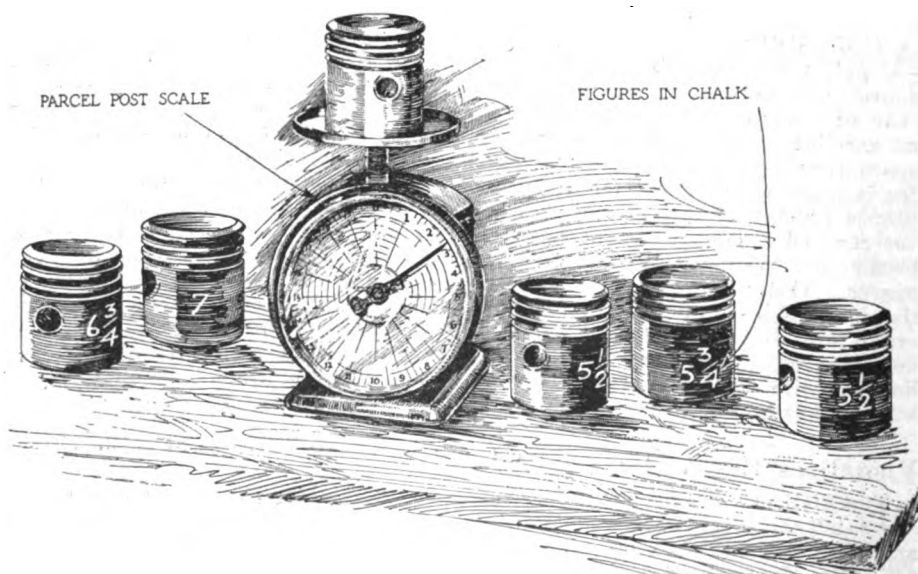


Fig. 1—Balancing pistons on a parcel post scale and marking the weights in chalk. It is not necessary to mark the pounds, only the ounces

terminated with the scale and a support as shown in Fig. 5.

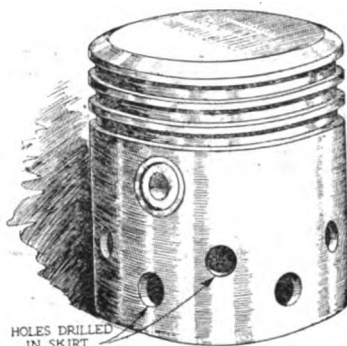
Effect of Oversize on Balance

Some shops make a practice of reboring, regrinding or lapping one or more cylinders which are scored or in otherwise bad condition and letting the other cylinders go. This may or may not be bad practice according to the make and age of the car and the grade of work turned out by the shop. In general, it is bad practice to replace one piston oversize because the bore of that cylinder is thereby increased and will deliver more power to the crankshaft than the other pistons will. However, where the amount taken off the cylinder wall is just a skim, say .001, the difference will be so slight that it will hardly be possible to detect it. The following table, worked out for several oversizes of a 3% in. bore will serve to illustrate how the area increases:

Oversize	Increase in Area, Sq. In.
.001 in.	.006 sq. in.
.002	.011
.005	.029
.025	.148
.040	.236
.100	.597

It can be seen from this that increasing the bore of a cylinder 1/10 in. will in-

Fig. 2 (right)—If the piston is too heavy, it can be lightened by turning some of the metal from the inside of the skirt. Fig. 3 (below)—Drilling the skirt will also reduce the weight. This should be cautiously done so as not to remove too much



HOLES DRILLED IN SKIRT

wanted, these problems of balance should not be neglected and it is possible with the equipment that is in nearly every shop to correct most of the glaring faults.

The man who has charge of the parts should know some of these things, and there is no reason why he could not, in spare time, weigh up these parts and mark the weights with chalk so that time could be saved by the mechanic.

Parts supplied by the car and truck manufacturer are sometimes consider-

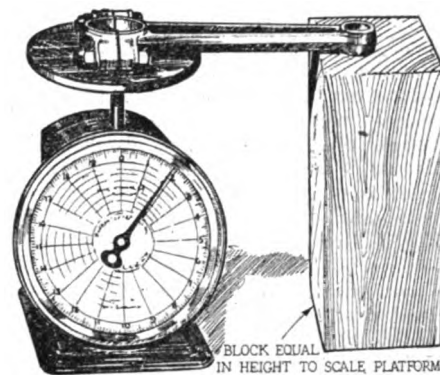
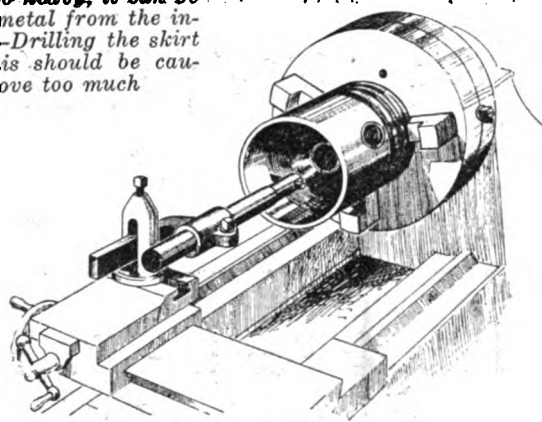
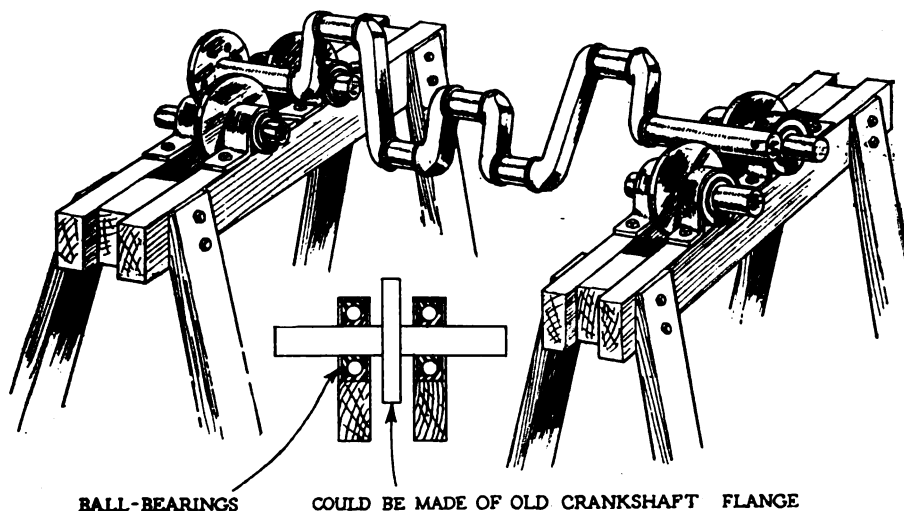


Fig. 5—Weighing the lower end of the connecting rod with the other end supported on a block of wood the same height as the scale



BALL-BEARINGS COULD BE MADE OF OLD CRANKSHAFT FLANGE

Fig. 4—A crankshaft balancing device which consists of the flanged ends of old crankshafts revolving on roller bearings. The horses are of wood

crease the area of the cylinder almost 6/10 sq. in., and assuming the stroke of this engine to be 4 in., the increase in cylinder displacement would amount to over 2 cu. in. Figuring the problem out by mean effective pressure, the increase in push on the connecting rod on the .001 oversize piston would be about .3 lb., and in the case of the .100 oversize, 30 lb. pressure. This latter is prohibitive, but there are many other things in an engine that would cause a variation of much more than the first mentioned .3 lb., such as improper carburetion, faulty spark plug, scored cylinder, too wide a gap in piston ring slots, leakage around spark plugs, caps, gaskets, etc., unequal compression chambers and other things.

Where a first class engine job is

ably different than the ones assembled in the truck. Sometimes this is due to the fact that the parts have not been ordered correctly.

It is just recently that considerable trouble has been caused owners of one make of truck due to the fact that the factory makes pistons of two different styles for the same model truck, one with the piston pin hole higher than the other. These are known as high and low compression types. Of course the assembly of one of these pistons in an engine with three of the other type would cause knocking and pounding, and much time might be lost in hunting for the trouble as mechanics are not much given to measuring parts supplied by the factory. All the pistons in one engine should be of the same type.

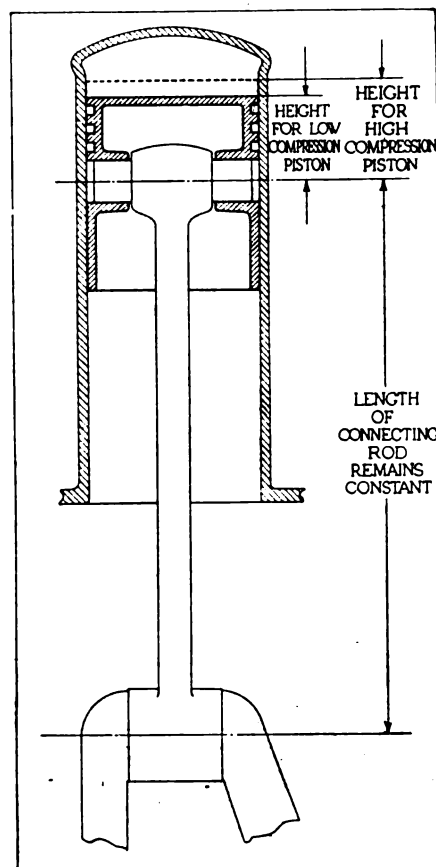


Fig. 6—Showing the difference between the high and low compression pistons and how they would affect the running of the engine

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Filling Station Part of Dealer Building

THE incorporation of a drive-in filling station with a dealer building is a construction that is open to some criticism. In this layout, the filling station occupies the corner which would normally be devoted to the car showroom, as display is of greatest importance to this department of the business. But if the filling station is located elsewhere it will interfere with the layout of the balance of the building, and in addition, in a subordinate position, its volume of sales would possibly be somewhat smaller than when located on the corner.

The accessory store faces on the filling station, and it is provided with doors at either side so that it may be entered conveniently from both streets. Every owner having his tanks filled is a prospect for accessory sales, but many filling station operators have found that accessory and gasoline sales do not mix. While the driver is being sold an accessory his car is standing at the pumps, and consequently blocks the way for other cars that may drive up for gasoline. In other words, accessory sales are made at the expense of both service and sales at the pumps.

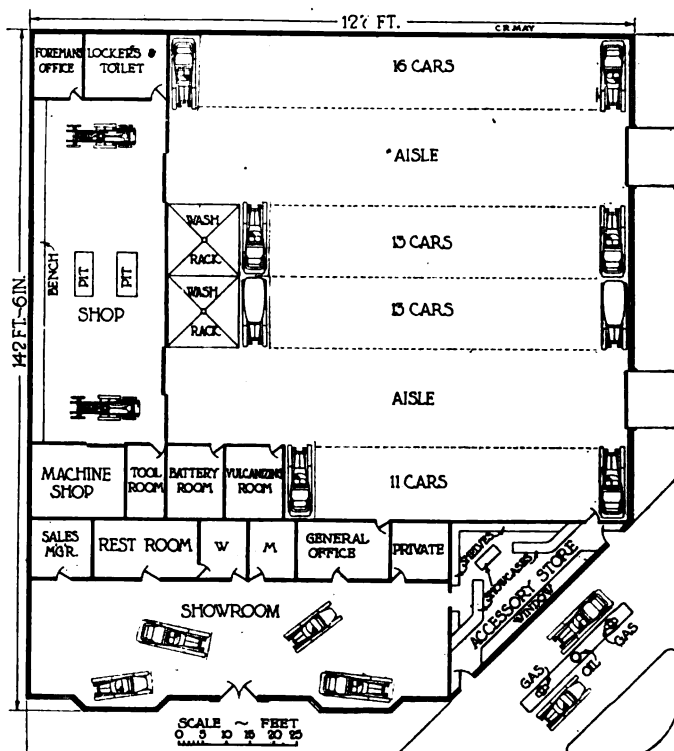
An alternate solution would be to have the car showroom occupy the space taken by the accessory store, and to place the latter in the space now used for the left side of the showroom. This would provide better display for cars, but would not, obviously, furnish the visibility that would be obtained if the showroom occupied the corner.

As a rule we do not favor the incor-

poration of a filling station in a dealer building in this manner, but of course local conditions will sometimes justify this construction. No roof has been placed over the filling station, and this is in accordance with most modern practice, as experience indicates that this is an unnecessary expense except in unusually wet climates.

The interior arrangement of the accessory store is worthy of comment. The store is not simply a place to make sales, but it is also a place for display of the goods offered. For this reason, it is important to provide display facilities that will help in the creation of business. Here, the showcases are so placed that the customer sees them immediately on entering. This layout has been in successful use by merchants in other lines, and is well adapted to the automobile business.

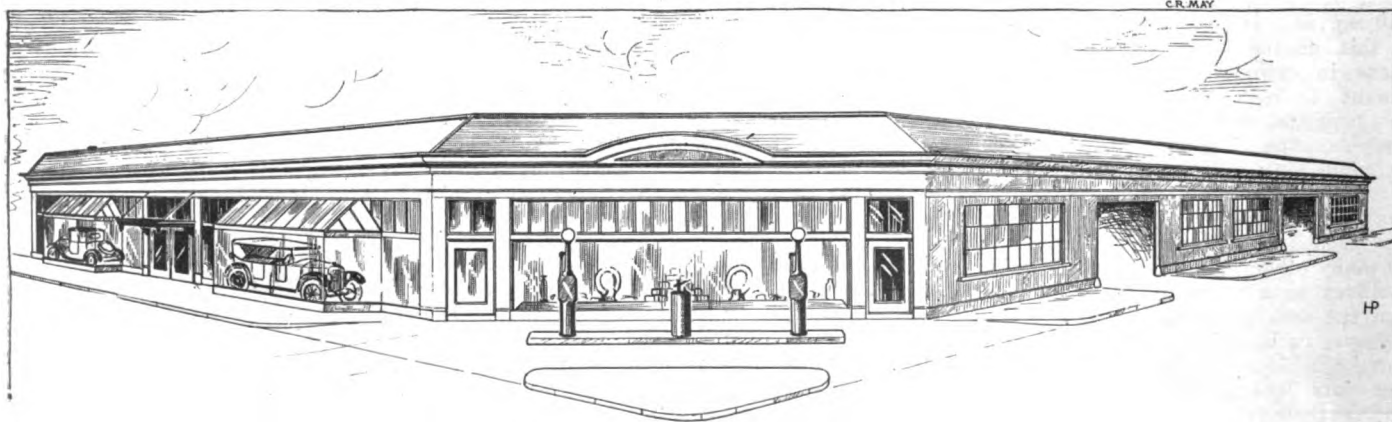
The bay windows in showroom are another display feature of this building.



Floor plan for one-story dealer building on lot 142 x 127 ft.

They provide some of the advantages of a corner location. The showroom is unusually large, and if conditions demanded, might be divided up to take care of truck or tractor sales.

The columns supporting the garage roof should be located between the two center rows of cars. This divides the building into two sections which will require trusses of about 50 ft. to support the roof.



The cost of building a roof over a filling station is not usually justified

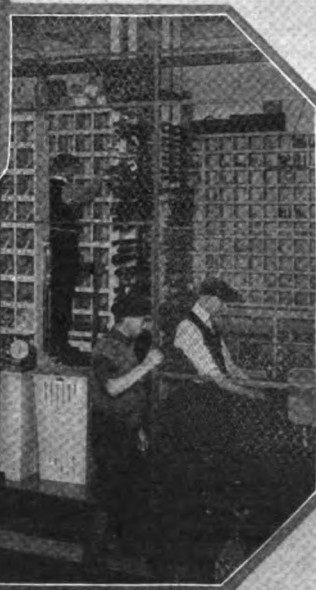
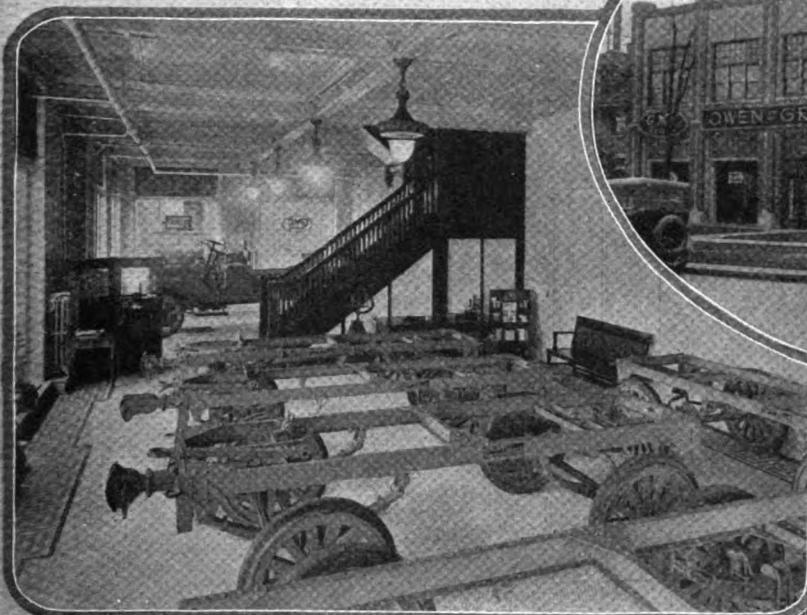
When You Build For Truck Sales



Get Utility and Durability
and Service into the Picture.
Here's how
The Chicago Oneida Truck Co.
does it.



Trucks and trailers
are shown in the
salesroom of this new
Owen & Graham Co.
Building, Detroit.



The Owen & Graham Co.
Parts Department is modern
in arrangement and
efficient in operation.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?
Why don't you ask MOTOR WORLD's legal editor to discuss the question?

North Carolina Lien Question

Editor Motor World: Please advise if we have a lien law in North Carolina which provides that garage keepers have a lien on motor vehicles for parts and accessories furnished same, where car has gone out of their possession. Also for parts and accessories where car has not been in their possession. Also tell us where to find the North Carolina lien law referred to in Motor World, July 23, 1919. Our attorney is unable to find any such law. We need this information at once.—Bryson City Motor Co., Bryson City, N. C.

Answer.—The only lien I know of in your State is the lien given to mechanics for repairing, altering, etc., personal property, and this lien is dependent on the retaining possession of personal property on which the lien is claimed.

In other words, there is no real garageman's lien law in your State. The law referred to in the July 23, 1919, issue of Motor World, is the above, which is section 2435 of the Consolidated Laws of North Carolina (1919), and does not cover storage or anything sold, not used by you to repair or alter, etc., the car. This section provided:

Any mechanic or artisan who makes, alters or repairs any article or personal property at the request of the owner or legal possessor of the property has a lien on such property so made, altered or repaired for his just and reasonable charges until paid, and if not paid within thirty days if it does not exceed fifty dollars, and within ninety days if it does exceed fifty dollars, after the work was done, such mechanic or artisan may proceed to sell the property, so made, altered or repaired, etc., at public auction, by giving two weeks' notice of such sale by advertising in some newspaper in the county where the work may have been done, or if there is no such newspaper in the county, then by posting up notices of such sale in three of the most public places in the county, town or city in which the work was done, and the proceeds of such sale shall be applied first to discharge said lien and the expenses of the costs of keeping and selling the property, and the remainder if any shall be paid over to the owner thereof.

Court Upholds Bonus Claim

The Supreme Court of Michigan, in the recently decided case of Berlin vs. Champion Spark Plug Co. reported in 180 N. W. at pg. 349, held that under a profit sharing agreement whereby the purchaser was to receive a bonus of a certain amount for each spark plug, the

bonus was not limited to 5000 spark plugs. This agreement, the court decided, entitled the purchaser to the bonus from the manufacturer although the jobber from whom the plugs were purchased had allowed a discount for prompt payment.

In this case various writings and correspondence were held to establish a bona fide contract.

Motorcycle Must Show Two Lights in New York

In a recent case in the New York Supreme Court, it was decided that a motorcycle with a side car attached must show two lights.

Judge Woodward, in discussing the case, said, "A motorcycle covering substantially the space of an ordinary four wheeled car with only one light, is a constant menace to those using the highways; and the legislature has provided that in using the side car the motorcycle shall be equipped with two lights, and the plaintiff cannot be permitted to recover without showing that he has complied with the law. This is especially true when he alleges the machine was operated in a 'proper and lawful manner,' and then fails to establish the facts where the complaint puts them in issue." Willie vs. Luczka, 184 N. Y. Sup. pg. 751.

Garageman Held Negligent

That a garageman who stands by without making any effort to remove a car which is stored in his garage when there is imminent danger of the garage catching fire is guilty of negligence and therefore liable for the destruction of a car belonging to a customer was the decision in a late California case.

The court decided that the customer was privileged to bring suit for the damages sustained by reason of the negligence, even though the customer had not paid and had made no tender of the storage charges due the garageman before bringing the suit.

In this case it appeared that the fire had started across the street from the garage and that the garageman was present as a spectator for at least a half hour before the garage caught fire and that he made no effort to remove the car even when he was advised to do so because of the danger of the garage catching fire, by others present at the fire. Hobson vs. Silvea, 194 Pac. pg. 525.

Seeks Vehicle Law Advice

Editor Motor World: Dealers Association will present bill present legislative session requiring license all drivers nominal fee. Professional drivers stand examination on fundamentals of automotive gas engine. Mechanics to be licensed following satisfactory examination in classes one two three. All others to be known as apprentices providing minimum age for drivers. Can your legal department aid us in any suggestions from your knowledge like laws in other states. Write,

T. C. P. Motor Car Co., Helena, Mont.

Answer: I suggest you write to the Motor Vehicle Conference Committee, 346 Madison Ave., N. Y., for a copy of the Proposed Uniform Vehicle Law, and in addition write to the Secretary of State in New York, Pennsylvania, New Jersey, Illinois, Massachusetts, and as many other States as you see fit asking for a pamphlet copy of their Motor Vehicle Act. With these in hand you can decide how you want your bill to read.

Owner Not Responsible

That where an automobile owner left car in the custody of a repairman that it might be put in good order, he was not responsible for the death of a person injured fatally while the repairman was tuning the car up, is the recent decision of the Supreme Court of Massachusetts.

In this case it appeared that the repairman had the entire right to control and exercise direction over the work to be done—in other words, he was an independent contractor—and, accordingly, his negligence while driving, according to the court could in no way be fastened upon the car owner. Whalen vs. Sheehan, 129 N. E. pg. 379.

Contract Declared Rescinded

Where a seller of a motor car wrongfully retook the car the buyer could treat the contract as rescinded and get back the money he had paid on account of the purchase price, was the decision in the recently decided case of Daskopolis vs. Mulvanity, 111 Atl. pg. 832.

The Supreme Court of New Hampshire held in this case that as the buyer had taken under contract of conditional sale, and the seller refused to return the car after wrongfully retaking it from the buyer, the latter was under no obligation to pay the remainder of the purchase price not then due.

Repairshop Shortcuts

No. 2859—Wrench for Oakland or Vim Clutch Bearing Nut—An old wrench handle is welded to one part of an Oldham magneto coupling and this will fit the cone clutch bearing nut on the Oakland, Vim and other cars.—O. E. Drumwright, Wilson Motor Co., Danville, Va.

No. 2860—Parallel Clamp—This clamp is made with a lug at the lower end of each jaw, this being drilled and tapped for cap screws. The clamp will hold irregular work for surface plate scribing or by removing the cap screws, can be clamped to the bench as shown at the right.—Charles H. Willey, Concord, N. H.

No. 2861—Brake Anchor Pin Tool—On some cars the brake anchor pin has a deep slot so that if jammed, the side breaks off easily. This tool surrounds the pin and prevents this breakage.—F. X. Eggenpiller, Jr., Yager Motor Car Co., Louisville, Ky.

No. 2862—Increasing Leverage of T-Wrench—A piece of cold rolled steel bent as shown makes a good lever to use with a T-socket wrench and is not so apt to bend the wrench as when laid across the whole handle.—O. E. Drumwright, Wilson Motor Co., Danville, Va.

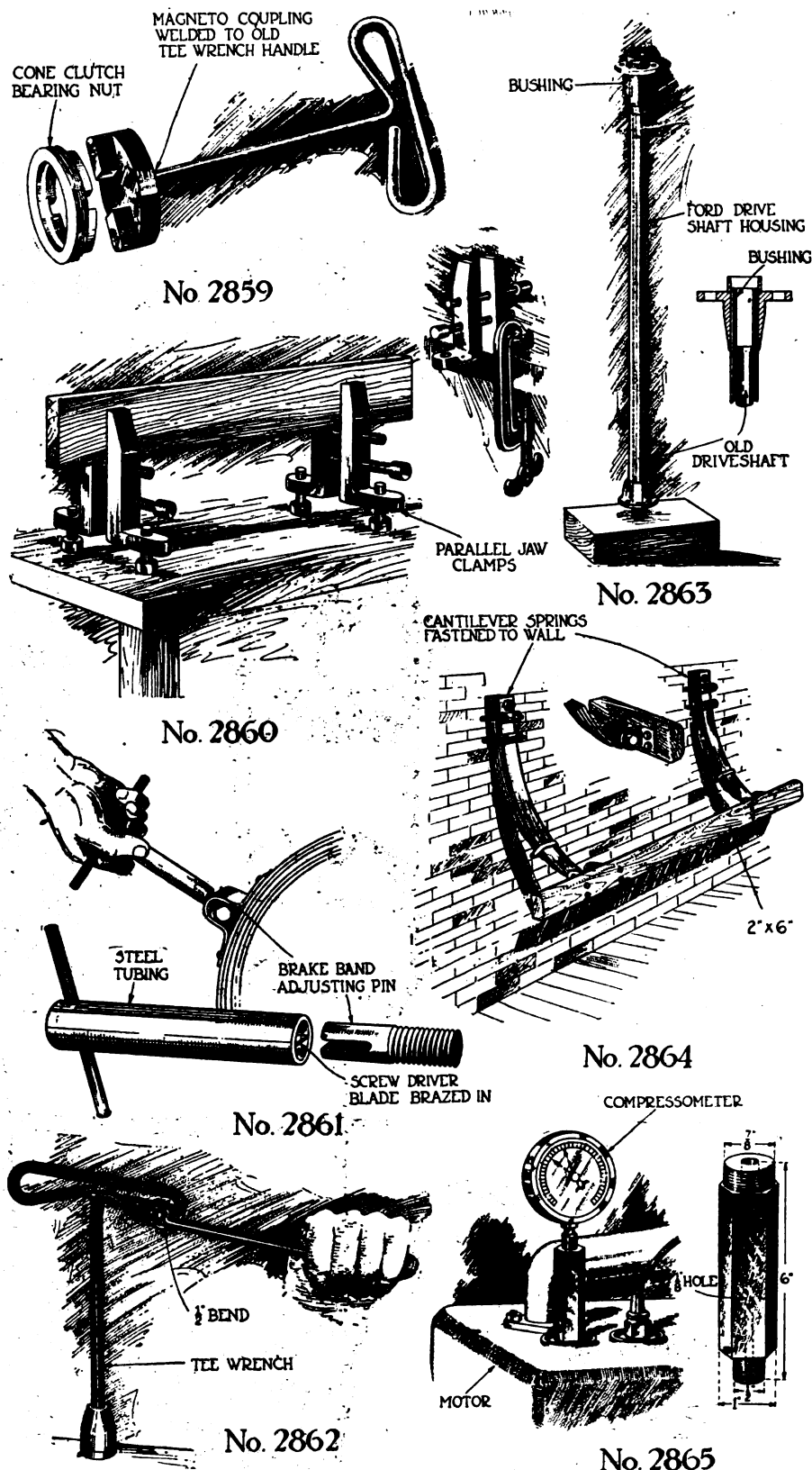
No. 2863—Ford Driveshaft Housing Bushing Remover—Enlarging the end of an old Ford driveshaft so that it will catch the bushing, the housing is dropped against the shaft which rests on the floor. This will force the bushing out.—Fred S. Tatman, Cain's Garage, White Hall, Ill.

No. 2864—Garage Wall Bumper—Two old springs of the cantilever type, connected at the shackle ends with a piece of lumber will make a wall bumper to protect cars. The springs can be connected to the wall with expansion bolts.—Lowell Butcher, Colfax, Iowa.

No. 2865—Universal Bushing for Cylinder Compression Gage—A piece of hexagon steel is drilled with a $\frac{1}{8}$ in. hole and turned and threaded on both ends, one end being $\frac{1}{2}$ -in. pipe size and the other $\frac{1}{8}$ -S. A. E. size, the hole is enlarged at each end and threaded for the gage. Either end can then be used, depending on the spark plug size.—Walter H. Flessel, Huntington, L. I., N. Y.

MAKE A DOLLAR

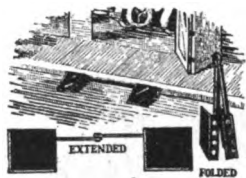
SEND in a sketch and a description of the device you doped out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.



Automotive Equipment

KURB-KOMFORT

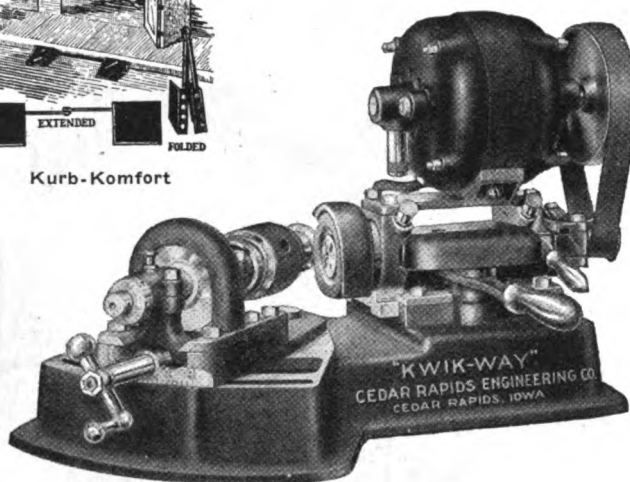
This is a portable runway for raising an automobile to the level of the sidewalk, and it is especially useful when the curbing is high. It consists of two wooden runways, 16 in. square, which are connected by folding arms. The weight is 10 lb. They are made for any height of curb. Price—\$3.50.—Arnold & Co., 11 Arch Street, Providence, R. I.



Kurb-Komfort

KWICK-WAY VALVE FACING GRINDER

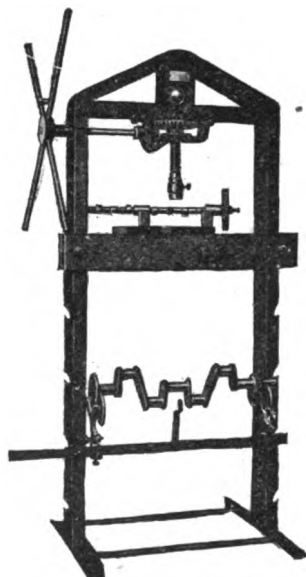
The valve is held by a specially designed chuck, which rotates it while the wheel is grinding its face. The entire equipment is mounted on an iron base. It takes valves up to 3-in. heads and ½-in. stems, and by means of a graduated swivel may be set to grind valves at any angle from 25 to 65 deg.—Cedar Rapids Engineering Co., Cedar Rapids, Ia.



Kwick-Way Valve Facing Grinder

PERFECTION ARBOR PRESS

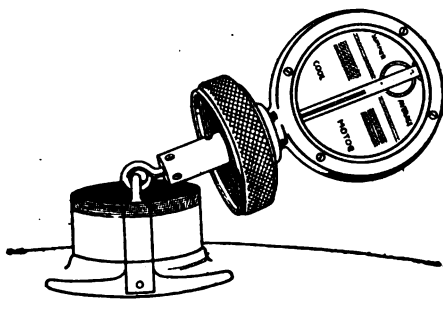
A combination arbor press and truing-up machine. The frame is constructed of structural steel channels. The cross tie is welded in place. Slots are provided in the vertical frame members so that the table may be set at various heights. The truing up device consists of a pair of centers and a set of four disks carefully machined. An alarm bell warns the operator when the screw is reaching its limit. These presses are made in 30- and 50-ton sizes.—Naperville Machine Co., Naperville, Ill.



Perfection Arbor Press

LEE LOCK FOR MOTOR METERS

In order to make this lock theftproof, a section of the nozzle that screws to the Motor Meter is milled out and filled with solder after it is attached. The meter can not be removed without melting the solder. It is made in four models as fol-



Lee Lock for Motor Meters

lows: ¼ in., DeLuxe; ½ in., Universal and Standard; ¾ in., Junior, Midget and Ford; Special for Overlands. Prices are \$1.75, \$1.50, \$1.25 and \$1.50 respectively.—Lee Mfg. Co., Ann Arbor, Mich.

COLUMBIAN LIGHTNING HOIST

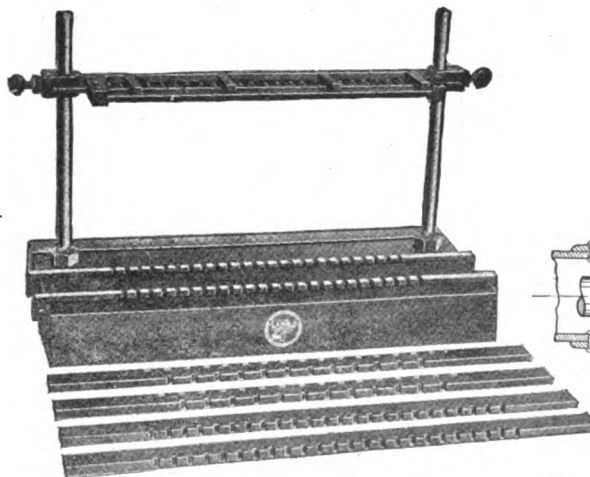
This hoist occupies 8 in., and allowing 3 in. of space for thickness of lift arms to be attached to the front of the body, the body can be mounted within 11 in. of the driver's seat. The height of the hoist is 66 in. The hoist operates through a combination bevel and spur gear reduction. Body descends by gravity, and a brake and ratchet provides for stopping in any position.—Columbian Steel Tank Co., 1605 West Twelfth Street, Kansas City, Mo.



Columbian Lightning Hoist

CAMOLD ASSEMBLING RACK

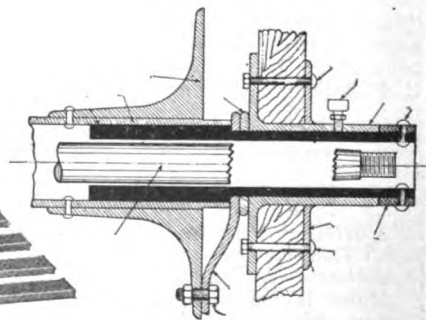
These racks are made in three sizes. No. 20 is 10 ins. long, has one top and two bottom combs, and will handle practically all plates up to ¼ in. No. 21 is the same as 20, but is equipped with three top combs, and bottom combs to match, and will handle all plates. No. 22 is a large rack for big shops. Prices are \$4.40, \$16 and \$22.50, respectively. Campbell Engineering Corp., 3803 Woodland Avenue, Kansas City, Mo.

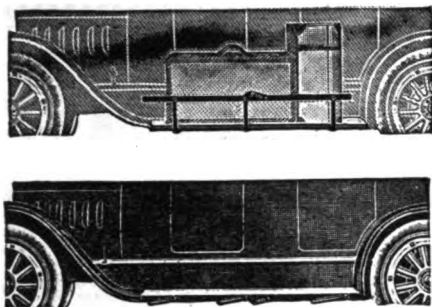


Camold Assembling Rack

SHAMBAUGH EMERGENCY HUB

A device for the Ford car and truck. It consists of a steel sleeve supporting a hub drilled to fit a Ford wheel. The sleeve is held within the axle housing, and is fastened to the housing flange. It is used in towing cars which have broken axles or wheels, or locked gearing.—Shambaugh Mfg. Co., LaFayette, Ind.

Shambaugh
Emergency Hub



Out-O-Site Luggage Carrier

OUT-O-SITE LUGGAGE CARRIER

The feature of this carrier is that when not in use it folds down inconspicuously along the edge of the runningboard. A spring holds it in position both when it is in use and when it is folded down. It is ordinarily attached with twelve screws, but on cars with pressed steel running boards stove bolts are used. Price, \$4.50; west of Rockies, \$5. —Chicago Tool & Kit Mfg. Co., 12 North Market Street, Chicago.

PEERLESS WATER CIRCULATOR

This is a centrifugal pump for installation in the Ford cooling system. It is driven from the fan drive, a special belt being provided for the purpose. The capacity of the pump is 5 gal. per min. It is not necessary to drill any holes to mount the pump. All parts needed for its installation are furnished.—Standard Auto Accessories Co., 127 South Green Street, Chicago.

JIFF-ON TIRE CHAINS

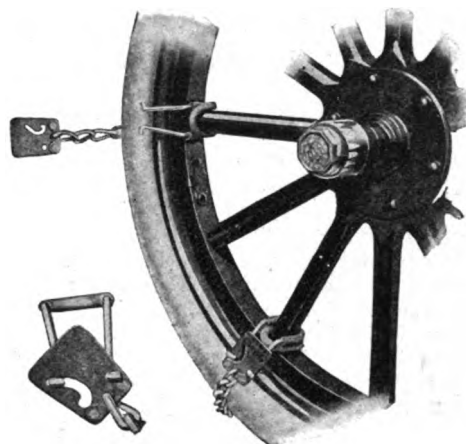
A set of these chains, which is equipment for two wheels, consists of 12 chains—one for every other spoke. The chains are attached to the spoke by spring forms covered with rubber, which fit snugly. Price, per set for 3- and 3½-in. tires, \$5.—Midland Co., South Milwaukee, Wis.

SAVE-A-TIRE

This is a rubber liner that fits between the casing and the tube. The liner is cemented to the casing so that it can not creep. All sizes are made, from the small 3½-in. tire up to the large 6-in. casing. Prices range from \$3.75 to \$10. Special sizes are made for motor cycles, and these are priced at \$3.25.—Save-A-Tire Co., Post Office Box 624, Cincinnati.

MIDWEST STOPSHOK WHEEL

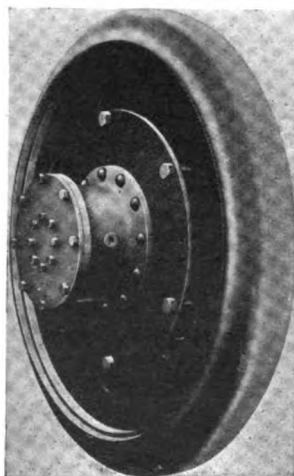
This is a new type of cushion wheel which is designed to reduce the unsprung weight. It is so constructed that all road shocks are transmitted to a heavy helical spring mounted in the hub. These wheels have been tested on the road, and the manufacturers state that unusually satisfactory results have



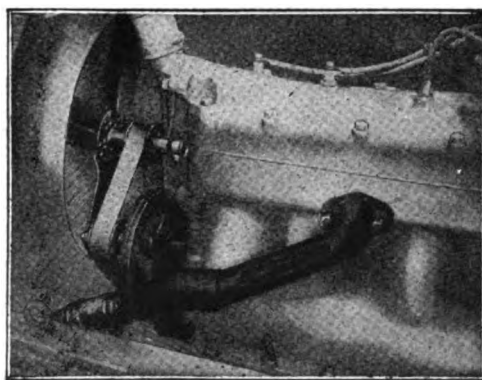
Jiff-On Tire Chains



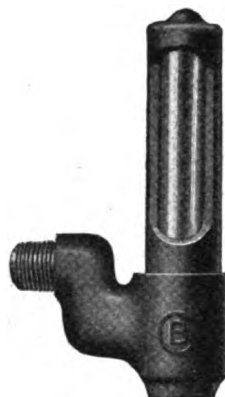
Save-A-Tire



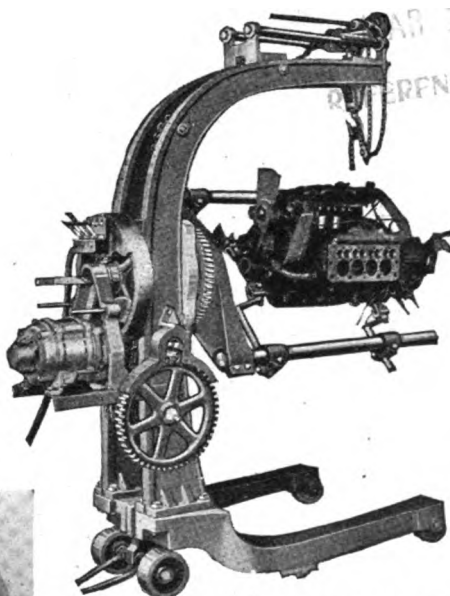
Midwest Stopshok Wheel



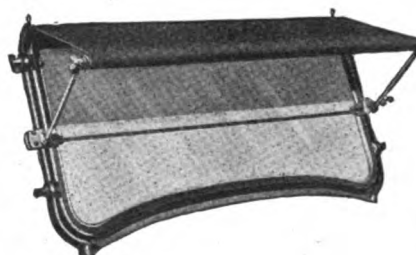
Peerless Water Circulator



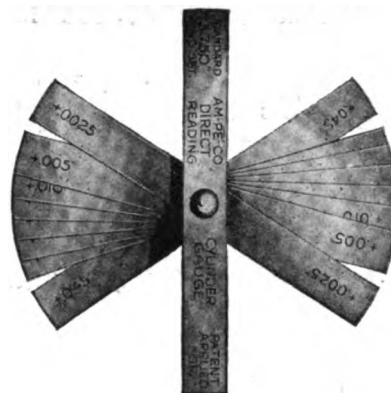
CB Oil Gauge



Eco Universal Motor Handling Machine



Hamilton Vision Shield



Am-Pe-Co Cylinder Gage

been obtained.—Midwest Engine Co., Indianapolis, Ind.

AM-PE-CO CYLINDER GAGE

A direct reading cylinder gage consisting of nine gages of different lengths which are held together by a pivot at the center. This provides for gaging the cylinder for standard diameter and eight oversizes. The ends of the gages are ground in the arc of the circle, whose diameter is the length of the gage. Ford, Fordson, Dodge, Maxwell and Chevrolet gages are carried in stock, but sizes for every engine are made.—Am-Pe-Co Sales Co., Marshalltown, Ia.

CB OIL GAGE

This oil gage is especially designed for the Ford car. It is solidly constructed, and is said to be efficient and reliable. Price—85 cents. Cumings Bros., Flint, Mich.

ECO UNIVERSAL MOTOR HANDLING MACHINE

This machine is designed to handle the engine of any car without the use of special bolts or blocking, as the universal clamping heads adjust themselves to any shape. A revolving engine stand is included, and inasmuch as it is supported at but one end all parts of the engine are made unusually accessible. Two hooks are furnished for rear axle work. The electric motor attachment is detachable and is designed for portable floor jobs such as cranking stiff engines. Price, Model U-100, \$750. — Western Mfg. Co., Oskaloosa, Ia.

HAMILTON VISION SHIELD

These shields are made in two styles. The DeLux model is made of double texture black automobile top covering; the side arms are round and finished in nickel, and have coil springs to assist in rolling up the curtain. The standard model has flat side arms, adjustable in length and finished in black. Prices are \$17.50 and \$9.75, respectively.—Hamilton Products Co., 413 Fifth Street South, Minneapolis, Minn.

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

What Kind of Service Sells Cars?

This is a letter written from personal experience and observation by a former Service Supervisor who is now a wholesale salesman

Editor Motor World: We are reading about and actually experiencing the great need of better service to owners as a sales stimulant and a means of keeping cars sold.

We do not, however, seem to be reaching the heart of the service problem which is so necessary to successful sales promotion work. For the last two or three years the majority of dealers have been subletting their shops so that they could claim an added compensation from their business as a whole, thinking that they were getting by with a small service cost and reducing complaints in the salesroom. I will have to admit that they did get by in the few years past, but there is an aftermath which must be considered seriously and remembered if a dealer is to be successful where competition is keen and where he will have to actually sell instead of merely buying to fill orders.

What good does it do a salesman to make the remark that service is the fundamental claim of our business success unless that claim can be backed up in its fullest sense? Regarding the above, I have in mind a fully equipped shop employing eighteen or twenty men of the highest rank in their respective line. The dealer who sublets this shop to the garage proprietor claims it to be (his) shop, and gives the prospective customer that impression.

The salesman may have been able to turn the sale by giving the prospect this understanding. Soon after the car is delivered to the customer some difficulty arises with the car and it is taken to the repairshop for the necessary repairs. Upon meeting the floorman the customer is advised that the shop is an independent organization and that the cost of any work will have to be borne by him. In addition to this the customer owning a car sold by this dealer will be advised that he cannot be taken care of within six or seven hours as other work had come in ahead of his, and he will therefore have to wait his turn.

This other work is where a great deal of dissatisfaction arises. It is practically impossible to sub-lease a garage to an individual without that individual deeming it advisable to take care of his outside work previous to the dealer's

service work. If a dealer finds it necessary to sub-lease his garage he should by all means insert a clause in the contract clearly indicating that service work on his cars should without exception be taken care of prior to any work on any other type or make of car.

The training of service managers and courtesy men and their conferences of such executives is very fine, but the heart of the matter as above stated has nowhere near been reached. In my estimation greater responsibility rests upon the faithfulness, integrity and ability of the mechanic at the bench than upon anyone in the service department. A service man, if he has personality and has had experience in handling the public, can shortly be trained to fit any position. But it takes years to train a mechanic to perform his work in an efficient manner. Why should a service manager be employed to straighten out the difficulty caused by carelessness or the inefficiency of a repair man? Should not the repair man be made to understand his work and do it efficiently, and within a reasonable time in preference to having a service manager try to settle, or I should say irritate an old sore caused in the customer's mind and which is impossible for the customer to forget?

You may say, "What is the solution?" In reply, I would state that the only solution is to standardize the training of automobile mechanics, the same as a machinist, carpenter, bricklayer, cabinetmaker or any other tradesman is trained, which is by years of experience and concentrated study in his respective work.

Factories have from time to time established schools at their factory headquarters for the purpose of training mechanics. An investigation of such efforts clearly indicates that a very small percentage of mechanics in the field are capable and in other ways permitted to take advantage of such schools, that are generally located many miles from the mechanic's home. In this connection it would be my suggestion that instead of the mechanic being compelled to make the trip to the factory, let the factory make a trip to the mechanic. This can be done through the medium of clearly defined instruction letters put up in such a manner that they clearly and concisely instruct the mechanic how each and every operation relative to the repairing of a car is handled.

Go further than that, give him the best course in the handling of the lathe, drill press, shaper, milling machine and

short-cuts to removing a bolt that has been twisted off in a casting, etc. A good repairman must be an electrician, machinist, internal-combustion engine expert, blacksmith and a wood worker. Having had actual experience in the machinist trade and later working in repair shops, my observation of the tactics and methods used by the average automobile mechanics leads me to pity them, and when I say pity them I do not only mean the mechanics, but the other fellow, the owner, who has to pay the bill for such mechanic's inefficiency. Full-fledged machinists should be encouraged to take up automobile work. A repairman backed up by the machinist's trade is of inestimable value to a dealer. Such a machinist can also pick up the electrical and carburetor phase of the work rapidly, due to his trained mind.

Considering the above, why not get down to business, and by the next three or four years have dealers throughout the country equipped with men that know how to apply themselves in doing a faithful, efficient and honest day's work for an honest day's pay for scientifically solicited and later satisfied owners.—George S. Wilson, Studebaker Corp. of America, Automobile Branch, Kansas City.

Urges Standardization

Editor Motor World: I wish you could impress upon the minds of manufacturers of automobiles the necessity of standardizing sizes of parts, discontinuing conflicting models and also freakish designs. I should make the following recommendations:

1—All engines to have counterbalanced crankshafts, counterbalances made on the shaft and not bolted on.

2—Not less than 5-in. stroke with long connecting rods, light flywheels and valve area increased as nearly all engines of to-day are exhaust bound.

3—Engines and equipment more accessible and easier to repair.

4—Standardize on size of bolts.

5—Intake manifold built in block of engine so that carburetor can be bolted directly to engine block, eliminating intake manifolds and aiding vaporization of the heavy fuel in use to-day.

6—More simple arrangement of camshaft and valve push rods, etc. One designer has overcome this to some extent, but can it be more perfected and simplified?—R. W. Anderson, Graham, Tex.

Oldsmobile "Light 8" in Production

Price Set at \$1695 for the Touring Car
and \$2395 for the Sedan and Coupe

THE Oldsmobile Light Eight which was first shown at the New York Automobile Show, is getting into production and will be the big quantity production job of the Olds factory this year. In *MOTOR WORLD* issue of Jan. 12 the general details of the new model were given, but at that time it was impossible to give many of the minor details as these had not been definitely settled. The factory tool equipment for this job has been carefully worked out and over one and one half million dollars have been spent on this alone.

The chassis is practically identical with the four-cylinder chassis and does not present any changes of importance. The new engine has a great many up-to-date features in its design and manufacture, resulting in a great reduction of labor cost and consequent ability to market this car for \$1,695 for the touring car and \$2,395 for the sedan and coupe.

The engine is of the regular V type, the angle between the blocks being 90 deg. The blocks are cast in groups of four, with removable cylinder heads, the major portion of the manifolding being integral. With a bore and stroke of $2\frac{7}{8}$ by $4\frac{1}{2}$ in., a displacement of 29.2 cu. in. per cylinder is secured, and a total displacement of 233.7 cu. in. The rated horsepower is 26.45, but the actual horsepower developed is 57 at 2600 r.p.m., or, in other words, a little over 4 hp. per cu. in. of piston displacement. The engine has three point suspension.

In the design of the cylinder block, the valve passages are so arranged as to allow a valve inclination of 6 deg. $17\frac{1}{2}$ min. towards the center-line of the cylinder at the combustion chamber. Another factor in design of the cylinder block is in the integral intake manifold. Distribution of gas has been given considerable study in this engine, the intake passage being notable for the absence of abrupt bends and the free, uninterrupted passage of the gas. Exhaust passages are in line with the intake, sweeping around in an easy curve and allowing the exhaust to be carried away through a manifold bolted on top of the block. The location of the exhaust passages in the cylinder block is directly over and crosses the intake passages, thus pre-heating the intake.

Another point in design of

the block is in connection with the water circulation. This is entirely around the cylinder bores and also around the intake and exhaust manifolds. The water inlet from the pump is in the form of a

Specifications of the Oldsmobile Light Eight, Model 47

Price—Touring Car, \$1695

Sedan and Coupe, \$2395

Engine—8 Cylinders, $2\frac{7}{8}$ x $4\frac{1}{2}$

Piston Displacement—233.7 cu. in.

Lubrication—Pressure

Clutch—Borg & Beck dry disk

Gearset—3 Speed Selective

Universal Joints—Spicer

Rear Axle— $\frac{3}{4}$ Floating

Chassis Lubrication—Alemite

Tires—32 x 4

Manufacturer—Olds Motor Works,
Lansing, Mich.

tube cast as part of the cylinder block. This tube has five separate leads to the cylinder, the three main water holes being located at points directly opposite the space between the cylinder barrels. The holes through which the water is supplied to the jacket are drilled through the bosses on the outside of the cast pipe, the outside bosses afterwards being plugged. This is done to insure an even supply of water between each of the cylinder blocks. At each end of the cylinder block a wall is carried out and an inspection plate entirely closes in the valves and keeps the springs and tappets free from dirt, and also acts as a noise preventive.

Garagemen Submit New Bill

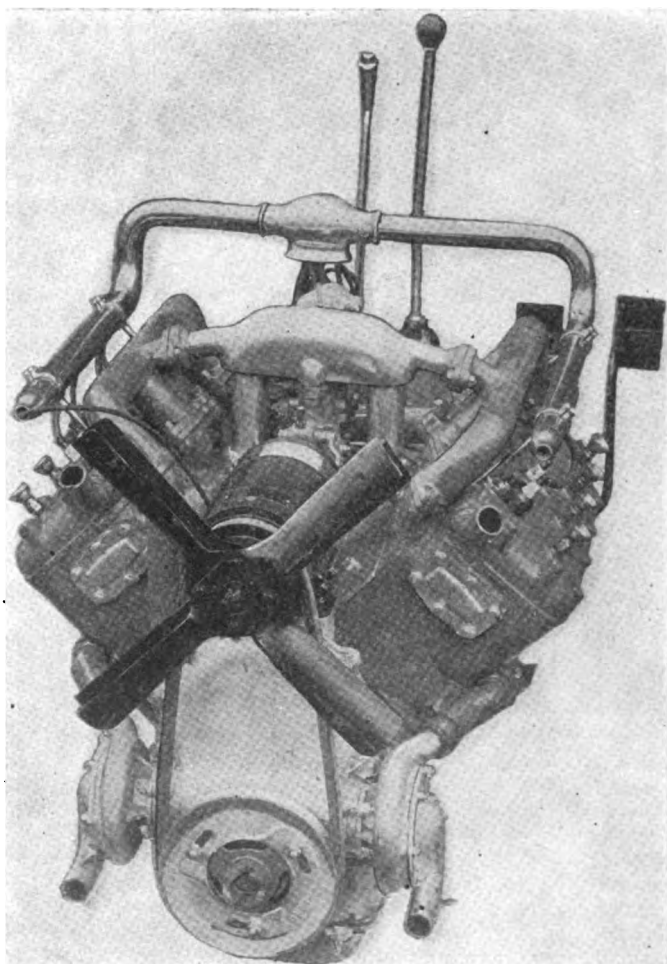
SPRINGFIELD, ILL., March 5—To take the place of the garage lien law declared unconstitutional by the Supreme Court of Illinois, there has been introduced in the State Senate a bill "for the better protection of any person, firm or corporation expending labor, skill or materials upon, or furnishing storage for, any chattel, creating a lien upon such chattel, and providing for the enforcement of such lien."

This measure has been prepared under the direction of the Chicago Garage Owners Association after a wide study of lien laws in operation in other States, and has incorporated in it the best qualities and important provisions of other State laws.

Ontario to License Garages

TORONTO, March 5—Bill 76, "An Act to Amend the Motor Vehicle Act" of the Province of Ontario, introduced in the local legislature by Hon. F. C. Biggs, Minister of Public Works and Highways, contains, for the most part, salutary revisions that will have the support of the vast majority of motor vehicle owners of the Province.

The amendment requires that all garages, motor vehicle storehouses, etc., be licensed by the Department of Highways, the license fee to be fixed by order-in-council from time to time on the recommendation of the Minister of Public Highways. Doubtless the automotive trade associations will have something to say on this score especially as regards the fee.



The Oldsmobile Model 47 eight-cylinder engine

San Francisco Dealers

Make Annual Exhibit Less a Show and More a Salesroom

Much Encouragement for Dealers in Increased Attendance and Strong Public Interest in Cars

WHILE, at the time of writing, one night yet remains before San Francisco's Fifth Annual Automobile Show is brought to a close, final figures are not needed to prove it a very successful exposition.

As far as attendance goes, the revenue derived from admissions is already \$300 above the total gate receipts for the 1920 show and all week the big Exposition Auditorium has been well filled with a keenly interested, good-natured crowd that came to see—and for the most part, buy—new automobiles.

the floor during the show. (This is not taking into consideration sales that were admitted by exhibitors to be "premeditated" before the show opened.) With one night still to go it is highly probable that the number of sales will reach 250.

A Selling Show

The buying has been general, no particular price class being favored, although Buick, Mitchell, Franklin and Studebaker seem to have fared slightly better than the rest.

There was an entirely different atmosphere about the show this year. It was

fully and bring the spender full value.

This attitude was further pronounced by the attention the visitors gave to the cut-open chassis, of which there were a goodly number scattered about. Especially where a lecturer held forth these were surrounded by a large number of people, not averse to asking pertinent questions.

There were 58 different makes of cars exhibited in the arena, adjacent rooms, and corridors on the main floor of the big Auditorium which recently housed the National Democratic Convention. On the second floor were to be found some 800 accessories; and in the basement, 49 trucks, tractors and trailers were shown. The accessories drew a large share of the interest, but the trucks did not seem to hold much appeal to the average visitor.

The widely heralded Marmon miniatures, built to one-quarter scale and outwardly, exact reproductions of the larger Marmons, proved real attention-getters.

The Buick staged a highly instructive display that was somewhat out of the ordinary. A trio of pretty girls, clad in overalls, tore down and re-assembled various units of the Buick chassis, while a lecturer explained to the crowd each move of the process. The novel demonstration sought to impress accessibility and simplicity in construction.

Another exhibit where the gentler sex played an important role was that of the Willys-Knight and Overland. Here a very young woman was in attendance and proved a very capable sales lady. Judging from her conversation and replies to questions her knowledge of the cars was unlimited.

Country Dealers Attend

The show has attracted a veritable army of dealers from all over the state to San Francisco and the leading hotels of the city have been gathering places for the different organizations; numerous banquets and conventions being held.

The largest event of the whole show week was the banquet of the Motor Car Dealers' Association of San Francisco, held on Wednesday night in the main ball room of the Hotel Fairmont. The dinner was attended by 500 guests, representing the entire San Francisco motor car industry. Among the speakers of the occasion was Mayor Rolph, of San Francisco.

The 'Frisco Show—A Glorified Salesroom



There was strong selling atmosphere in the beautiful show staged in the Exposition Auditorium by the dealers of San Francisco. Many of the displays contained special merchandising features. With attendance ahead of last year and sales satisfactory a big spring stimulus in sales is expected

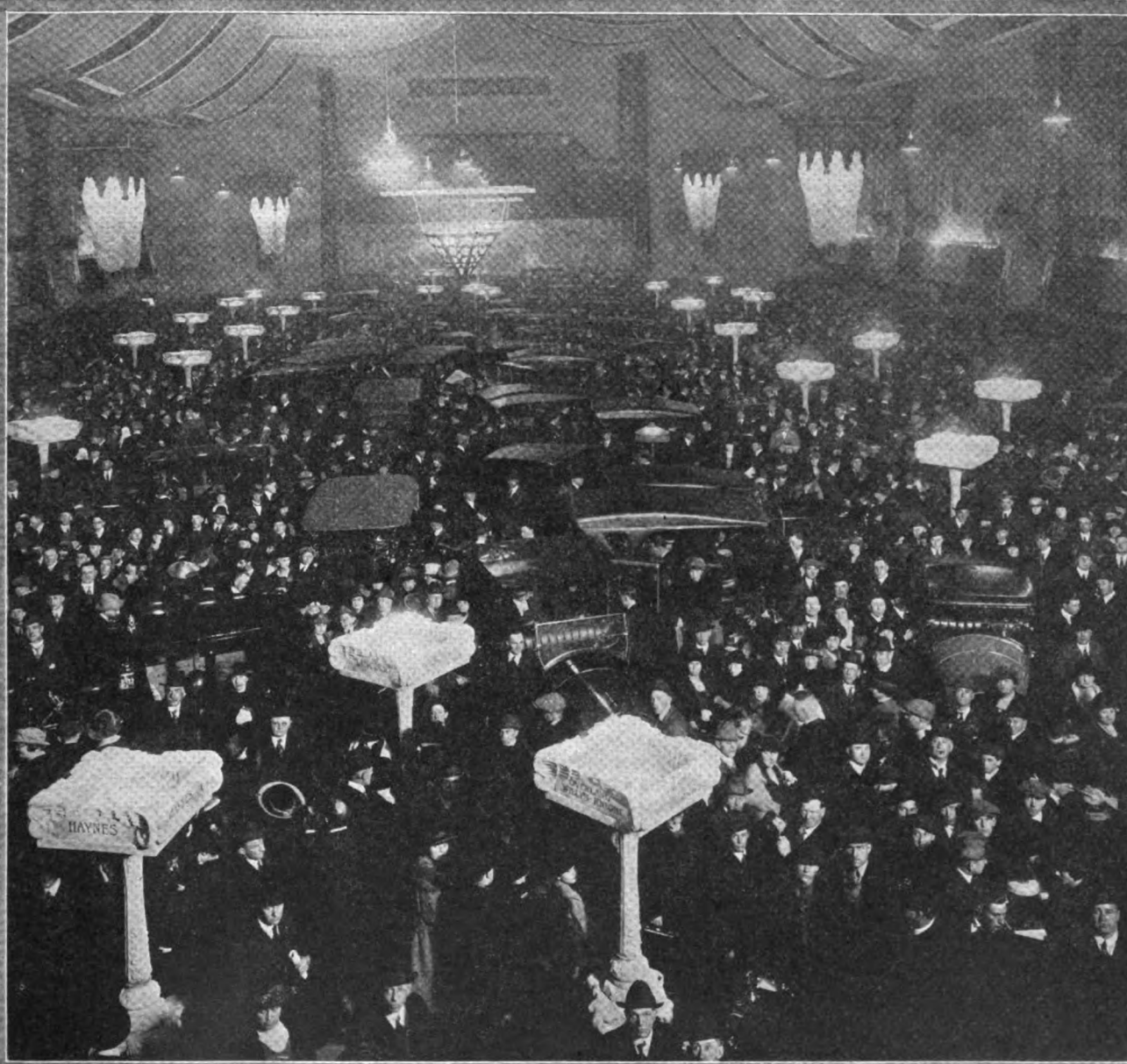
The number of actual sales recorded so far is not phenomenal, but, to quote one exhibitor—"It's darned encouraging." A careful canvass reveals that, up to date there have been approximately 200 actual retail sales made on

less of the show and more of the salesroom. The crowd seemed to have adopted a "prove to me why this is a better car than any other" attitude. It was there to spend real money for automobiles but, it was going to be spent care-

Oh, Boy—

Page the Pessimists!

In This "Depression" Attendance at the Recent Oakland, Cal., Show There's a Story That Needs No Words to Tell—Show It to Your Banker, Your Prospects—Let It WORK for You



Manufacturers Become Confident

PARTS ORDERS SHOW RETURN TO BUSINESS

Boom in Buying Brings Release of Long Held Up Orders— Credits Better

NEW YORK, March 1 — Better business is coming in the automotive industry. In fact it already has arrived. The pulse of life is stirring in all its branches. The stimulus of increased sales at retail has worked back at last to the car manufacturers. They are moving cautiously but they are swinging into production. There has been no big splurge about it and there is no false optimism but there is no mistaking the tone of the market.

The evidence is unimpeachable. It comes from the parts makers who supply the manufacturers of complete vehicles. They are getting some new business but better than that they are receiving an increasing number of "releases" on orders which have been held up since the slump began. These "releases" do not run into huge sums but they show that the dam has been broken and they are beginning to turn into money some of the materials they have had on hand for months.

Individually these orders are not large but they bring with them reports of production in plants where there has been none before and of increased output in factories which have been doing some business. Most of them are for delivery this month. Numerous parts plants which have been running at 20 per cent of normal will double their output in the near future as the result of this business.

Collections are no worse than they were and in some cases they are better. This is true especially of houses which deal directly with automobile dealers and shows better selling at retail. There are many reports of motor vehicle manufacturers who have been hanging on gamely and whittling down their indebtedness as rapidly as they could by working down their inventories and disposing of their products. Frozen credits are being thawed out gradually.

Truck Plants Come to Life

Most of the orders are coming from passenger car manufacturers but there is some improvement apparent even in the truck field where business has been virtually dead.

Parts manufacturers are giving earnest consideration to the question of prices. Many of them already have cut the price of their own products and feel strongly that the prices of motor vehicles must come down before the market can be entirely stabilized.

FORD IN INTERVIEW DECLARES MARCH ORDERS CALL FOR PRODUCTION OF 3100 CARS DAILY

DETROIT, March 5—These facts about his gigantic business enterprises were disclosed by Henry Ford this week in an exclusive interview with a representative of the Class Journal publications:

That 15,800 employees were working in the Highland Park plant to-day.

That 2,860 cars were produced in Highland Park and branches daily last week.

That 2,502 engines were built at Highland Park Wednesday.

That there were 95,000 cars in the hands of dealers and 30,000 in process of construction at the branches when the Highland Park plant closed, Dec. 24.

That 57,000 cars were sold during January, liquidating the 30,000 completed in the branches and 27,000 of the dealer stocks.

That retail sales for the first half of February were 42,000.

That total production for February will be 35,000.

That sales, on the ratio continued through February will approximate 85,000, assuring liquidation of 50,000 more of the dealer stock.

That dealer requirements for March are 70,000, necessitating a production schedule of 3,100 daily, within 1,100 of the record for daily production.

That working forces and production will be increased steadily until normal production is reached.

That continued operation and increasing production are contingent on steel prices, and that if the company is forced to again shut down it will be due solely to prohibitive steel prices.

That there will be no reduction in the wages on specific jobs and no reduction in the minimum scale.

That the Ford Motor Co.'s reply to reports of financial stress is the announcement of steadily increasing working forces and output scheduled to reach close to normal by the end of March.

That the executives now in charge at Highland Park and River Rouge will constitute the permanent official personnel with official titles in most cases eliminated and concerted efforts being directed to development of Ford products and policies.

That 2,700 men were employed at River Rouge to-day, 1,700 having been added to the 1,000 which have been working there without interruption throughout the period of depression.

That a production schedule of 100 tractors daily was started at the Rouge plant to-day, which will be increased as demand requires.

CHANGE FOR BETTER COMES IN NORTHWEST

MINNEAPOLIS, March 5—A start in the automotive business is being felt by distributors. "Things are coming back" is a statement by one of the biggest distributors in the northwest. While it cannot be said money is much easier, yet there seems to be a revival among the consumer buyers. One firm wrote in that it has sold the first car in six months. This is considered a good sign, as it is from South Dakota. While the dealers do not ascribe all the credit to the various northwestern shows they are willing to say they had their effect. The revival is said to be due to a general come back in business. The weather of February was the warmest in 30 years, save one year. Spring is in sight much earlier than usual. No blizzards have been experienced and the general lack of snow in the roads promises an earlier spring with an expected buying movement. Heretofore conditions have not been reported bright from this territory, but the change seems to have come.

Sell Used Cars in Ottawa

OTTAWA, ONT., March 4—Trading under the name of "The Motor Company," Bertram Lemlin and D. G. McGowan will devote their attention to the sale of used motor cars in Ottawa. The firm will guarantee against misrepresentation and are determined to build a reputation for fair play. No rebuilt cars will be sold and no attempt will be made to overhaul any car, the idea being to sell as received, covering no deficiency.

That business was waiting for such an opening has been very apparent by the number of inquiries for used cars already received, while a number of owners have listed cars for sale.

Belleville Holds First Show

ST. LOUIS, March 4—One hundred and three automobiles and a large number of accessories were displayed at the first annual Belleville, Ill., automobile show, held March 3 to 5. The exhibition was the first ever attempted in this town because of its proximity to St. Louis.

As Business Moves Steadily Ahead

ST. LOUIS TERRITORY CONTINUES TO GAIN

Poor Road Conditions Hold Back Deliveries and Delay Replacement Orders

ST. LOUIS, March 5—Sales in the St. Louis territory have improved steadily since the show last month. Distributors of cars report a good early spring business, and there has been some brightening of the truck situation.

Out in the territory sales are picking up rather slowly due to poor road conditions and also to the continued frozen condition of credit. There has been some improvement in the situation, but not enough to enable dealers to stock cars to any extent for spring delivery nor to extend their time sale business.

Quite a good many of the country passenger car dealers have been unable to induce prospects to take deliveries of cars already sold and on which the dealers hold deposits. There have been practically no demands for the return of these deposits, indicating that the purchasers have no thought of cancellation, but apparently they are unwilling to pay the balance of the purchase price until the roads improve sufficiently to make car operation practical. This condition has left some dealers without much credit support in the position where they are unable to place orders with distributors for additional cars, thus slowing up the entire process of delivery from the factory on.

None of the distributors is counting on equaling last year's business, but there is confidence there will be a good volume throughout the year sufficient to offer profits both to wholesalers and retailers.

SIXTY SALES REPORTED AT WEST VIRGINIA SHOW

CLARKSBURG, W. VA., March 5—The most successful automobile show of the season in the State was held four days beginning Feb. 23 in the capacious garage of the Garrett Automobile Co. Ninety cars valued at \$160,000 were exhibited. Dealers reported sales broke records.

The show opened with "Ladies Day," a novel feature which brought members of the fair sex out in great numbers. The show was under auspices of the Clarksburg Automobile Dealers Association. Space was donated to the Clarksburg Automobile Club, which had a booth and where new memberships were taken.

It is estimated sixty cars were sold during the show besides many trucks. Ten thousand persons attended.

TRADE STORMS CLEAR FROM MARCH HORIZON

NEW YORK, March 7—A weather forecast for the automotive industry for March indicates that while it will be partly cloudy there will be more of sunshine than there has been for several months, and that as spring approaches the "fair and warmer" flag will be displayed with increasing frequency. Here are some of the signs that the clouds are breaking:

Ford is preparing for production on a basis of 75 per cent of capacity by the last of this month.

Production in the various General Motors plants have reached 50 per cent of normal.

Most Detroit manufacturers are adding to their forces and speeding up production to meet increased orders.

Sentiment in the Detroit territory is much more hopeful than it has been for weeks.

Akron tire factories show more signs of life than they have since last spring.

Automotive plants in various parts of the country are resuming production on a small scale and gradually augmenting their forces.

Dealers in most of the industrial districts report steadily mounting sales, and even in farming sections there is increased interest.

The upward trend includes both passenger cars and trucks.

KLINGENSMITH TO BUILD CAR TO SELL AT \$1500

DETROIT, March 8.—F. L. Klingensmith, former general manager for Ford, and F. F. Beall, formerly in charge of production for Packard, took over the Gray Motors Co. to-day and will build a 4-cylinder car which will be sold for about \$1500. The new venture will be backed by the Canadian distillery interests of the Walkers, by the Gray estate and by Detroit and Grand Rapids bankers.

Templar Orders Increase

CLEVELAND, March 3—President Bramley said the Templar Motors Corp. sold 40 cars in October, November and December, 20 in January and 68 in February, and that orders have been taken for 162 for March and April delivery. "We have 350 cars finished and 350 in process of construction," Bramley said.

LOUISVILLE SELLING KEEPS ON INCREASING

Business Better After Show Than During It — Looks Like Genuine Revival

LOUISVILLE, March 7—While sales made during the week of the thirteenth annual automotive show were about 50 per cent less than last year, according to conservative estimates, they have increased since the close of the Louisville exhibition Saturday night, and a genuine revival of trade is in progress.

Dealers said last night that while the sales were not up to last year or even the previous year, yet they indicated very clearly an early return to normal conditions for all lines of business. Business has once more returned to normal, some of the dealers said, which is even more to be desired than the abnormal conditions which have prevailed for the past three years.

Prince Wells, president of the dealers' association, said that all dealers were satisfied with the show and its results, and regarded the outlay for decorations, totaling about \$45,000, and the expenses for installing exhibits, as a profitable investment.

"The number of prospects obtained through the agency of the automotive show is probably three times greater than has been true of other shows," he said. "The dealers have enough business in sight to keep their sales organizations busy for the next two months. The benefits of the show will be felt by the automobile trade in Louisville and the State for more than six months to come."

The closing day of the show was marked by a number of sales being closed, for which negotiations had been begun earlier in the week. One dealer reported six cars sold on the floor, another reported nine.

Accessories in Demand

Accessory dealers displaying at the show reported to Wells that they had done more business on the floor this year than at any previous show. Most of the sales were to out of town dealers who were attending the show.

According to C. L. Alderson, secretary of the dealers' association, the individual buyer predominated at the show, and Louisville agencies, which heretofore had reached many prospects in the State through dealers in smaller cities, were able to get directly in touch with the purchasers. This he declared to be a great help to the dealers, because it enabled them to feel the pulse of the market better.

KANSAS CITY SHOW PROVES SALES TONIC

Business Hits Back Into Former Cheerful Stride— Bankers Surprised

KANSAS CITY, MO., March 7—The annual motor show in Kansas City has acted like brisk calisthenics on a man who has passed a restless night. The lungs of motor car dealers are full of oxygen, and the "megrimms" have been dissipated—for those who attended the show. And there are already signs that the healthful influence is extending far into the territory, upon the dealers, and the public, who did not come into personal and direct contact with the re-vivifying effect of the show atmosphere.

Distributors are receiving orders, and are shipping carloads. This phase is most significant, for it proves that the entire territory has been stimulated, that the dealers are ready to sell, and that the public is ready to buy. It demonstrates groups of facts, that dealers who attended the show have turned their minds to observation of 1921 spring conditions, have conceived the possibilities of trade—have discovered that former obstacles no longer exist, and have, by looking for them, found people ready and able to buy.

It demonstrates, too, that the financial situation is easing in the territory, that farm products are moving and putting into circulation those credits which people have got into the habit of calling "frozen."

Retail sales in Kansas City are increasing radically. One dealer reported 36 sales in February, of an expensive car. A small-car dealer reported more than 100 sales and deliveries for the month. Other dealers made similar statements of February business. It is significant that the increase began the week before the show, spurted during the show week, and jumped much higher afterwards.

This result is consonant with the expectations of many dealers who had confidently expected the show to bring results; they had said that people were fixing show week as the date when they would make final decision on purchasing. Some dealers took such "postponements" as the conventional method of shoving aside the solicitations of salesmen—and other dealers accepted

THE third annual three-day automobile show was held last week at Alton, Ill., and resulted in invigorating dealers who for some months have suffered from general business depression. Dealers report that the show, which was held under the auspices of Madison County Automotive Association, has proved to them that one of the reasons for business slack has not been the receding of buying as much as the failure to push sales.

such excuses as sincere. The latter class went after those prospects energetically—and landed them.

Dealers, because of increased sales, are themselves solving that misty "problem" of financing. One dealer paid off a \$25,000 note at the bank—much to the astonishment of the banker—within a week after the close of the show. Dozens of dealers are taking up notes.

Not only are the dealers themselves now in shape to handle business—but their liquidations of indebtedness are relieving the general stringency.

SPRINGFIELD DISCOVERS MONEY NOT SO SCARCE

SPRINGFIELD, OHIO, March 4—Dealers are highly elated over the success of the annual show which closed Saturday. Forty-three cars were sold, it was announced. According to C. S. Burke, one of the directors of the association, the largest number of sales at any previous show was twenty. He stated that the show was a buying show and far exceeded the highest expectations of the members of the Automobile Dealers' Association. More than 5000 persons attended the five days' exhibition.

Indications are that many more machines will be sold in the near future to those who attended the show and were impressed with the handsome cars on exhibition. From a financial standpoint the show was a success, Burke said. It shows that money is not as tight as many people believe, he said.

GEORGIA TOWNS FIND BUSINESS LOOKING UP

AUGUSTA, March 5—Dealers of the tenth congressional district of Georgia at a special meeting here, declared that the automobile business in the smaller towns has taken a turn for the better in the past few weeks and expressed the belief that the return to normal has set in. Nearly all of the dealers of the district, who are members of the Georgia Automotive Dealers Association, were present, and also Volney Williams of Waycross, president of the association; P. A. Magahee of Atlanta, secretary, and W. T. Watters of Macon, a director. The dealers stated that sales in the smaller towns and communities are still far below normal, but that greater interest is being shown by the public, while more actual sales are being made than for some months.

Charleston Sales Stimulated

CHARLESTON, W. VA., March 5—Retail sales of automobiles were stimulated in this city by the automobile show. This section has not been so hard hit as many others by the industrial depression, and the outlook is good for the coming year because Charleston's industries are diversified. As a matter of fact, the city is growing more rapidly than it ever has before. The population includes many persons of wealth and there is a good market for high priced cars.

SKILLFUL PROMOTION HELPS BUFFALO SHOW

Trade Producing Effect Un- questionable, Dealers Say —Publicity Invaluable

BUFFALO, March 5—Buffalo's nineteenth annual automobile show, which closed this evening after attracting record-breaking patronage, was unquestionably helpful to the automotive trade here and hereabouts because of its stimulating effect on merchandising.

The dealers with cars, trucks, tractors and accessories on display were unanimous in expressing their gratification over the fact that the show had accomplished much in the way of putting the inactivity of the last six months into the discard and in swinging merchandising back into its old-time liveliness. Everyone reported sales in encouraging numbers and the discovery of enough prospects to keep their salesmen busy for weeks to come.

One prominent dealer said, while the show was still young, that he would easily sell 100 cars as a result of it.

The show was skillfully promoted. Departing from its custom of previous years no mention of it was made until one month before its opening. From that time on week-end stories were printed in the Saturday and Sunday newspapers of Buffalo.

Beginning two weeks prior to the show there was conducted a live, intensive publicity campaign with effective stories daily in the newspapers here and with frequent publicity in the leading newspapers in western New York and northwestern Pennsylvania.

Supplementing the newspaper publicity, thousands of attractive posters were displayed throughout Buffalo and the Buffalo territory, and movie pictures were employed also to focus public attention on the exposition. The co-operation of civic associations was also obtained, the Kiwanis Club making its weekly luncheon an automobile show affair and thus giving the exposition a substantial boost.

The armory was artistically and effectively decorated for the show by E. W. Campbell of Boston; springtime being the motif of its charming embellishment.

THE annual report of the fire department at LaCrosse, Wis., impressively illustrates the economy of motor-propelled over horse-drawn equipment. Three triple combination trucks now in service traveled 761 miles to respond to 298 alarms during 1920 at a total expense to the city of \$602.89. During the same period, 14 horses used by the department consumed feeding stuffs costing \$2,433.13, and the horseshoeing bill for the year amounted to \$683.90 additional.

SAN DIEGO TO SHOW IN BEAUTIFUL SITE

Panama-California Exposition Buildings to House Big Coast Sales Effort

SAN DIEGO, CAL., March 7—San Diego is to have a show from March 26 to April 2 inclusive, the setting for which—decorations, buildings, etc.—tallied in cost approximately \$2,500,000.

Of course the San Diego Motor Car Dealers Association didn't spend that much. This is just another way of saying that the big 1921 automobile show in San Diego is to have a setting of marvelous beauty; is to be housed in the magnificent Balboa Park Exposition grounds that were visited by so many thousands during 1915-16.

Even more beautiful than they were four or five years ago, the grounds and lawns and tropical foliage, improved with age, surround the perfect buildings that have been kept standing as a permanent city park since the Panama-California Exposition ended.

H. J. Penfold, who was secretary of the Panama-California Exposition, and who is also executive secretary of the forthcoming Midwinter Exposition in San Diego, has taken charge as managing director of the automobile show for the San Diego dealers' association.

One of the spectacular features will be the lighting system, the general lighting for the interiors of the show being supplied by great indirect fixtures swung on chains and the booth lighting being supplied by strings of small hooded incandescents upon pergola work above the arches.

In addition to the lighting and decorating, the show committee now is spending much time, effort and money on the entertainment. For the eight days of the show approximately \$500 a day will be spent on paid entertainment in addition to the large amount of contributed talent that will be offered.

Buick in G. M. C. Building

DETROIT, March 4—Buick Motor Co. has moved its show and salesroom from Alexandrine and Woodward avenues to the new General Motors Building at Woodward and West Grand Boulevard. The new salesroom is one of the largest in Detroit, with a floor space of approximately 10,000 feet, nearly four times the size of the showroom occupied by Buick for the last 15 years. A mezzanine floor in the rear of the new showroom extends the entire width.

New London Decides for Show

NEW LONDON, CONN., March 5—Showing a reversal of the apathy manifested by individual members earlier in the season relative to the holding of their annual automotive exhibit, New London Automobile Dealers Association, in special session this week, voted to repeat, March 23-26 being selected as



The Motor Car's Palace in San Diego

Lucky chaps, those San Diego dealers Look where they are going to hold their show, late in March. This beautiful building is on the Panama-California Exposition grounds

the date. It has been learned that the State armory, contrary to earlier indications, can be secured for this date, and it has been reserved. Thornton N. M. Lathrop is chairman of the committee in charge of the arrangements, and already exhibition space has been booked for from 45 to 50 cars.

ALBANY CROWNS SHOW WITH USED CAR SALE

ALBANY, N. Y., March 4—"The greatest show ever conducted in New York State outside of Greater New York," is the comment of William A. Carpenter, president of the Albany Automobile Dealers Association, at the close of the eleventh annual show of the association which closed at the armory Saturday. The exhibit was viewed by 25,000 people and the attendance would have been greater if the trolley system of Albany and vicinity had not been tied up by a strike. Actual sales and future prospects exceeded the expectations of every one of the fifty-four dealers, and this record following a period of depression is looked upon as opening an era of big business in the motor car industry.

Many dealers are following the show with used car shows at their salesrooms to dispose of the cars taken in exchange for new models.

SIMONS FIGURES SHOW SALES NOT SO POOR

DETROIT, March 5—Figures compiled by Guy O. Simons, distributor for Willys products in Michigan, show that in January, 1921, his business amounted to \$105,905.24, as against \$71,223.81 in January, 1918. January, 1920, shows business aggregating \$359,928.84.

"We were all satisfied with the business in 1918," said Simons. "Everybody was making some money and until the period of abnormality, when buyers went wild, we were all entirely satisfied with conditions. Everybody must understand this fact and take it to heart, and realize that a business on a par with pre-war demand should be highly satisfactory."

As evidence of the rapid improvement, Simons's figures show that December business was approximately \$10,000 greater than that of November, the lowest month since the period of depression started last summer. January figures show an increase of \$30,000, and the business for February will show an even greater increase. Another significant factor also revealed by the figures is that November, though the lowest month for the depression period, was not the lowest month in point of sales and business done in the last four years. This applies to all companies.

MAKERS FIND SALES BETTER THAN HOPED

Declare Shows Have Performed Important Function—Used Cars Sell

NEW YORK, March 5—Sane optimism pervaded the members' meeting of the National Automobile Chamber of Commerce here this week. The spirit manifested was in marked contrast with that which has been apparent for the past few months. The manufacturers are convinced that the tide of business depression has turned and that the trend of trade will be steadily upward from now on.

While the manufacturers were confident that the readjustment of the industry to post-war needs has progressed well beyond the turning point, they do not expect a record breaking business in 1921, but they do believe that sales will exceed the fondest hopes they dared express two months ago. At that time they were hopeful, but not sanguine, that the shows would bring a resumption of buying. Now they are convinced that the annual expositions have done more than they ever did before for the industry.

There was a perfectly frank discussion of the situation among both passenger car and truck manufacturers. The situation in the passenger car field is undeniably better than in the commercial vehicle end of the business, but the market for trucks is strengthening. Business has not gone ahead by bounds, but the expansion has been steady although slow. The belief is almost unanimous that it will continue and that the volume of orders which has been coming in to the factories the past few weeks has not been a mere flash in the pan.

Reports gathered from twenty distribution centers by the National Automobile Dealers Association were read to the manufacturers. They showed a decided upward turn in sales everywhere except in the South and in South Dakota. They have risen to 75 per cent of normal in some districts. There has been a marked increase in sales of used cars, but they have been made at much reduced prices. This opens the way for sales of new vehicles.

Gains Chiefly in Cities

The improvement in business has come chiefly in the larger cities, and trade still is dull in the smaller cities and in the rural districts. Two factors are largely responsible for this condition. One is the fact that the purchasing power of the farmers has been largely reduced, and the other is that the credit situation in the rural sections still is unsatisfactory. The resources of small town banks are mostly tied up in frozen loans and many of them have borrowed as much as they can from the Federal Reserve or from the larger banks with which they have connections. Credit conditions in the larger cities are no worse and in some places are better.

One of the chief obstacles in the way of sales in the truck field is that the railroads now have more idle cars on their lines than they have had in ten years. This number is now approaching half a million. The falling off in freight has been the direct result of business depression and has limited the market for trucks.

The truck manufacturers were addressed by Alfred E. Smith, former Governor of New York, who is now chairman of the board of the United States Trucking Corp. in this city, the largest company of its kind in the country. He pointed out that storage facilities for trucks are entirely inadequate and that if they were enlarged there would be a much better potential market. His own company leaves in the street each night 2000 horsedrawn vehicles, but it must find roofs to shelter its trucks. There are almost no storage facilities in lower New York.

1921 Year of Adjustments

Both passenger car and truck makers were addressed by John Moody, president of Moody's Investors Service, who discussed "business and financial conditions and how they affect the automobile industry." He emphasized strongly his belief that 1921 would be a year of adjustment for the industry. He declared that no one industry can stand out against lower prices and asserted that even the cost of steel must go down.

While in New York, the manufacturers discussed informally among themselves, means they are employing to assist the small town dealer in promoting sales. Several companies are giving these dealers advice and assistance not only in salesmanship, but in finance.

AUTOMOBILE CLUB PLANS CAR SHOW FOR MEMBERS

NEW YORK, March 7—The Automobile Club of America is planning to hold an automobile exhibit in the headquarters, 247 West Fifty-fourth Street, during the week of April 4 to 9.

Most of the space, which will accommodate about 30 cars, has been spoken for by New York dealers and some of the factories. It is planned to hold the show for the benefit of the club members, and admission will be by invitation.

In announcing its intention to stage the exhibit the A. C. A. expressed the opinion that the project should prove a strong sales stimulant in the Metropolitan district, because it will attract motor car owners who are members of the club and thus provide an interested audience with a high percentage of purchasing power to which dealers may address their selling effort. It is expected that the show will bring the club much favorable publicity and stimulate interest in membership.

Under the present plans there will be no assessment for space, but arrangements are being made to divide the printing and other expenses among the exhibitors and the club. Detailed arrangements are expected to be completed within the present week.

SERVICE MUST MEET DEMANDS OF OWNERS

Truck Association Executive Says Methods Must Be Raised to New Standard

NEW YORK, March 4—C. R. Collins, general manager of the National Association of Commercial Haulers, in an address before the Automotive Service Association of New York last night, gave the industry, and the service division in particular, the most severe arraignment it has had in a long time. Collins's organization has a membership of over 30,000, owning 150,000 trucks valued at nearly a billion dollars, and has local sections in most of the principal cities.

He said service is the rock upon which the automobile industry will either be built or wrecked. Service since the start of the automobile industry has been unsatisfactory alike to the owner and to the manufacturer, he declared. Some progress has been made in some cases along some lines, but the one big thing that is causing so much trouble, he said, is the fact that service executives have failed to provide a system for setting repair costs in advance.

Collins said that owing to unsatisfactory service, many fleet owners had installed their own repair departments, and in some cases, where the fleet is big enough, the fleet owner maintains a complete stock of parts. While such a course as this is only open to the owner of a considerable number of vehicles, he declared, smaller owners have found it to be to their advantage to have a co-operative service station.

In Continental Europe, said the speaker, the service station or garage is almost unknown, and its place is taken by a "Guild," which buys direct from manufacturers. They are in such a strong position, he said, that they are able to dictate pretty much what they want to the manufacturer.

Collins said that it was not the intention of his organization to engage in this line of business unless, ultimately, it was forced to it. He made a strong plea for better service and better methods of handling the customer. He said that if the entire automobile organization would get together on some of the big things instead of each trying to handle problems separately, something might be accomplished.

ATLANTA SHOW OPENS TO RECORD ATTENDANCE

ATLANTA, March 7—Atlanta's show opened Saturday to a record breaking first day's crowd.

Under the stimulus of the interest shown by visitors, the dealers declare their confidence of many sales being made on the floor of the show, and also of many sales resulting from prospects uncovered by the show.

The show will continue throughout the week. There are 100 exhibits.

WILLS-SAINT-CLAIRE PRODUCTION STARTS

Price of Touring Car and Roadster to Be \$3,500—Many New Features

MARYSVILLE, MICH., March 5—Production of the Wills-Saint-Clair car is now under way. The price of the touring car and roadster will be \$3,500. No prices have been fixed for the enclosed models.

Complete technical details will be available later, but it is known that the engine will be of the eight-cylinder type with blocks at 60 deg. The chassis will have a wheelbase of 121 in. and the tires will be 32 x 4½ in. The bore is 3¼ and stroke 4 in. and the engine develops approximately 70 h.p. and gives the car a range of from 2 to 70 m.p.h. on high gear. The engine is of Wills design throughout and has an overhead camshaft, this being the only design of this kind in use in the United States. The camshafts are mounted above the blocks on each side of the engine and are driven from spiral bevel gears from the crankshaft, the drive being taken up the front end of the block by the spiral bevel gears and then to the camshaft, which extends overhead with the cams integral. The valves open downward into the cylinders direct.

The car is being made at present in five body models, a touring, roadster, coupe, sedan and town car. The open models will be put through first and the enclosed models later.

All of the cars are equipped with disk wheels of a special design as standard equipment and no options are being offered on this. The wheels are special design with a convex rather than a concave dish. The wheels and bodies are at the present being made by the Budd company and the trimming is done at the Marysville factory.

Will Present Low Appearance

In lines, the car presents a rather low appearance, the front view being rather square due to the rectangular radiator, with a very slight raised center. Mechanically, the car presents a number of very unusual features. For instance, the three-bladed, cast aluminum fan is designed to cut-out at high speed so as not to absorb an undue amount of engine power. The headlights, which are unusually powerful, are small and are equipped with magnetic tilting control from the steering column, the tilt is affected by rotating a hard rubber milled piece just below the horn button. The tail lights are double, one being a bright light which is automatically thrown in when the car is put in reverse to give a brilliant back light for driving backwards at night. There is also a lamp on the side of the car which illuminates a circle to the left of the car, making it possible to kill the glare of the headlights or to provide an illuminated area for working on tires, etc. at night.

The merchandising plan for the product, which has been worked out for the present, embraces a production of between 6000 and 6500 for 1921. Dealers have already been appointed for the New England, New York, Philadelphia, California and Chicago territories. A dealer for the Detroit territory will be appointed within the next 90 days. Deliveries to the dealers will be made during the last half of February. The New England dealer is the Fay-Allen Co.; the New York dealer E. B. Jackson, who recently resigned as sales executive for the Willys-Overland Company. The Philadelphia dealer is W. J. Foss, formerly vice-president of the Pierce-Arrow Motor Car Co.; the Chicago dealer is Dayton Keith, and the California dealer the Western Motors Co.

New York Distributer Named

The Wills-Saint-Clair car will be introduced in New York by the Wills-Saint-Clair Co., of New York, at the new salesroom at 1874 Broadway. The New York company is headed by Edwin R. Jackson, who formerly was president of the Packard Motor Car Co., of New York and later vice-president of the Willys-Overland Co.

Jackson will distribute the car throughout the northern half of New Jersey, and also in Brooklyn, Long Island, New York City and New York State and Connecticut, excepting New London.

MARCH OPENS BRISKLY IN NEW YORK MARKET

NEW YORK, March 7—An appreciable increase in used car sales and a spurt in the truck market due principally to the purchase of equipment by contractors, were the outstanding features of the week in automotive merchandising in the metropolitan district.

On the whole, car sales had been good in February with deliveries 80 per cent of the delivery volume of February, 1920. Recovering from a few days' lull following the snow storm, the market rose steadily and the first week of March brought sales in a volume that gave promise of a satisfactory spring season.

Dealers along the "row" find much encouragement in the indications of a less stringent money market. Business is breathing a little easier in New York, and this condition is being reflected in the prospects that enter the salesrooms and those upon whom salesmen have been working for the past weeks.

VESPER-BUICK Auto Co., Buick distributor for the St. Louis territory, has appointed the Cole County Buick Co., Jefferson City, Mo., as the new Buick retailer for Cole County.

This company was only recently organized, Governor A. M. Hyde of Missouri being a large stockholder. Brown Glenn is general manager of the new company.

KEYSTONE TIRE BUYS MOST OF A. E. F. STOCK

Practically All of Surplus Sold to New York Company—May Assess Tax

NEW YORK, March 5—Through information released by the Under Secretary for Liquidation of Stocks of the French government, it is learned that all but 12,800 tires of the 350,000 A. E. F. surplus has been bought by the Keystone Tire & Rubber Co. of this city. Information was declined at the Keystone offices here as to the number which have been already returned to the United States or as to the sizes of the tires.

Of the total of 337,200 tires bought by the Keystone company, about 200,000 are pneumatics and 150,000 solids. They are all of standard makes, and the pneumatics, for the most part, are said to be odd sizes. Information on the number of tires involved in the sale was obtained by the Rubber Association from the American ambassador in Paris.

It is understood that no excise tax was imposed on these tires at the time of sale to the War Department and that action will be taken now to assess this when offered for general sale to car owners and other buyers.

INDUSTRY PROGRESSES TOWARD UNITY ON TAX

NEW YORK, March 5—Considerable progress has been made the past two weeks in the direction of concerted action by all branches of the automotive industry on the question of Federal taxation. It is confidently believed that before hearings are begun by the House Ways and Means Committee at the extra session, the various organizations representing the industry will have united upon a definite program.

A working agreement already has been reached between the tax committees of the National Automobile Chamber of Commerce and the Rubber Association of America. The committees of the two organizations presented to their directors reports which were practically identical. Both called for economy in Governmental affairs, especially in relation to the military establishment, for the funding of the war debt and for a sales tax to provide whatever additional revenue is necessary.

Directors of the National Automobile Dealers Association have decided to stand with the N. A. C. C. on the tax question. A similar position will be taken by the American Automobile Association, and the Trailer Manufacturers Association is expected to fall in line. The Motor and Accessory Manufacturers Association has not yet appointed a tax committee, but it has been committed formally to some form of sales tax and it is hoped that its views will be adjusted to those of the other organizations.

TEXAS SMALL TOWNS FIND SHOWS HELPFUL

Keeps Business at Home, De- clare Dealers—Truck and Tractor Market Promising

DALLAS, Texas, March 4—The idea of automobile shows and automobile style shows has spread all over Texas this year and as a result a half dozen smaller towns have events scheduled which a couple of years ago would not have been undertaken anywhere except in the larger cities like Dallas, Houston or San Antonio. Dealers declare the value of the automobile and the necessity of it have become so pronounced that a display of the new models or of any new devices is absolutely essential to the trade in the smaller distributing centers. They declare that not to have these shows would result in many valuable orders going to the dealers in the larger cities where persons who are able to own the best of cars go to see the very latest in motor creation.

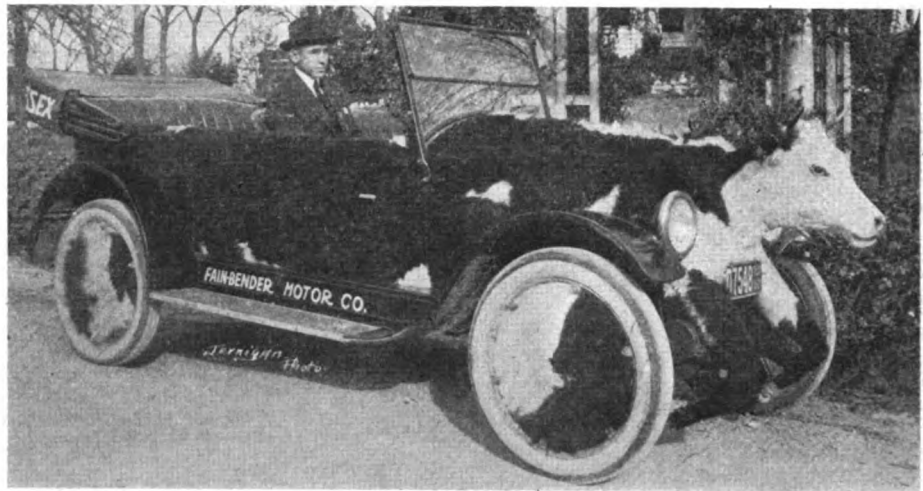
Hence automobile shows this year in such towns as Abilene, Amarillo, Sweetwater, San Angelo, Wichita Falls, Denison and Temple. These are towns of from 10,000 to 20,000 inhabitants where several distributors are located. The shows will be held or have been held in the larger cities of Dallas, San Antonio, Houston, Ft. Worth, Beaumont, Galveston and Waco. El Paso will also stage a monster show this spring.

A special feature of the shows in the smaller towns, surrounded as they are by grain and cotton belts, is the tractor and truck exhibits. In Abilene, Sweetwater, Amarillo, San Angelo and Sherman, tractors and trucks were seen or will be seen along with high class passenger cars.

El Paso to Hold Big Show

The Amarillo show was held Feb. 22 to 24. The show at Abilene was from Feb. 24 to 26. This is one of the biggest events in West Texas for the year. The big automobile show at El Paso will be held April 8 and 9. Dealers from three states will participate in this event and special cars for Mexico will be displayed. El Paso dealers do a thriving business in Old Mexico. There will be tractors galore, for Mexicans are getting hep to the use of the tractor. Laredo and Brownsville, two border towns who do a big business with Mexicans, will have their shows during March. The dates have not been announced. The dates of the Sweetwater, San Angelo, Temple, Sherman and Beaumont shows are yet open. They will be held before the first of May the dealers declare.

San Antonio has already held its annual automobile show and the dealers declare already many new orders have resulted from the display. The dealers in the Alamo City declare they never had such appreciative and demonstrative crowds as at the show held the first of the month. Practically every kind of



Getting the Automobile Into a Texas Stock Show

A valuable white-faced Hereford was sacrificed to dress up this Essex for Fort Worth's Fat Stock Show and Auto Exposition Week. The hood is entirely covered by the hide, while the head is mounted on the radiator. The decorating was done by Fred Bender of the Fain-Bender Auto Co. of Fort Worth. The stock and automobile show was held March 5 to March 12

automobile made was on exhibition for three days.

The date of the enclosed car show and the regular automobile show in Dallas has not been arranged. The dealers plan to have the enclosed car show early in March while the regular show will probably not be held until the fall of the year.

PARTS MEN ADVOCATE IMMEDIATE ROAD WORK

PHILADELPHIA, March 4—The Automobile Accessories Business Association went on record at its February meeting as indorsing the immediate expenditure of that portion of the funds available that has been appropriated for the use of building and repairing roads in the State of Pennsylvania.

The meeting was attended by more than one hundred members and guests. The speakers were Senator George W. Cartwright of California, whose topic was "The Fundamental Principles of Capital and Labor"; W. A. Whiting of the International Business Science Society, who spoke on the co-operation of this organization with business men; and Colonel George W. B. Hicks, secretary of the international relations committee, Philadelphia Chamber of Commerce, who addressed the meeting on the advantages of the automotive trade of Philadelphia's central location. Eighteen applications for membership were received.

Ottawa Plans Show Week

OTTAWA, ONT., March 4—Ottawa will have an automotive week during March if the plans at present being considered are carried out. The first annual show last year was a distinct success and it is certain that, under brighter business prospects of the year 1921, business will benefit to a very large extent.

HERRING MOTOR STOCK INCREASED \$1,000,000

DES MOINES, March 5—The Herring Motor Co. has increased its capital stock from \$500,000 to \$1,500,000. This material increase is to be handled on a declaration of a stock dividend of \$700,000 out of accumulated surplus and the placing on the market of \$300,000 first preferred stock.

The increase to \$1,500,000 in cold type looks to be an ordinary business matter, but back of this is a story of business achievement which reads almost like fiction. The Herring Motor Co. was formed about eleven years ago with a capital stock of \$25,000. From this beginning the company with its new capital stock and a business totalling \$9,000,000 has grown. Not a cent of outside money has ever been placed in the concern, so that it has grown directly from \$25,000 to \$1,500,000 on its own resources.

Even with the transfer of \$700,000 from the surplus to the new stock there will remain more than \$300,000 in surplus.

The company has common stock in the amount of \$500,000, a considerable portion of which is held by employees of the firm. Each employee is allowed to purchase one share of stock for each six months of service with the company, and as an illustration of the profit it has meant to the employees, one stenographer drawing a \$140 a month salary during the past year has received dividends amounting to more than her salary.

Fox Car for Fall Market

PHILADELPHIA, March 4—The newly organized Fox Motor Car Co. will place its new car on the market in the fall. The Fox car will be new in design, embodying an air-cooled system. Price of the touring car will be \$3,500.

Changes in the Trade

William H. White has been made manager of the Fidelity Motors Co., Baltimore, Peerless distributor in the State of Maryland.

Malcolm A. Campbell has been made sales manager for the Apperson-Baltimore Co., Apperson distributor in the Baltimore district.

John H. Samuels, recently with the tractor plant of the Moline Plow Co., has been appointed district representative for the Midwest Engine Co. of Indianapolis, with offices in St. Louis.

McDowell Supply Co., Oklahoma City, Okla., has broadened its line to include a general and complete line of automotive service station equipment exclusively at wholesale.

Westcott-Cleveland Co., Cleveland, has been selected for distribution of the Westcott line in that city and vicinity. **Homer R. Beckenbach**, president of the new company, for the past four years has been sales manager of the Cleveland branch of Willys-Overland.

D. E. Hunt has been appointed district manager of the Seltz Auto Co., for the eastern shore of Maryland and the State of Delaware, selling Velie cars and Service trucks.

L. M. Gillespie has been appointed manager of the Charleston Motor Car Co., Charleston, W. Va.

A. G. Walker has resigned his connection with the Dechert & Walker Motors Co., Springfield, Mass.

Majestic Auto Sales Co., Grand Rapids, Mich., has been appointed Haynes dealer for the northwestern part of Michigan.

John J. Stickle, Cleveland, and **John Thomas**, Akron, have taken control of the Automotive Co., Cleveland, distributor of Premier cars and Selden trucks.

Staten Island Selden Sales Co. of Port Richmond, N. Y., has taken on the Staten Island distribution of Peerless cars.

L. W. Ward of Passaic and Rutherford, N. J., Chevrolet and G.M.C. distributor in those cities, is now handling the Peerless.

Reynolds Empire Garage, Port Chester, N. Y., which handles Chandler and Cleve-

land, is now distributing Peerless in Port Chester, Rye, Harrison and Greenwich.

Frederic N. Dodge has been appointed sales manager of the Cleveland branch of the Baker-Fisk-Hugill Co., Dort distributor, Detroit. Dodge was formerly assistant advertising manager of the Dort Motor Car Co., Flint, and previous to that was connected with the Fairbanks company, New York, as sales promotion manager of the automobile and service station equipment division.

H. W. Altken, who handles Walter and Transport trucks and Elgin passenger cars in the Harrisburg, Pa., territory, has been appointed agent for Fulton trucks in that territory.

North Texas Monroe Co. has been named distributor for the Monroe in all North Texas and parts of Oklahoma and Louisiana. **Lloyd E. Williams**, formerly of LaCrosse, Wis., will be in charge. His headquarters will be at Dallas.

Hudson Motor Specialties Co., Philadelphia, has had registered in the United States Patent Office as trade mark, the descriptive title, "Crank Case Repair Arms."

H. J. Behr, formerly manager of mechanical sales for the B. F. Goodrich Co., in the Philadelphia district, has been appointed general manager of the Goodall Rubber Co. He will make his headquarters in the Goodall offices in Philadelphia.

W. A. Beardsley has been appointed district sales manager for the Winther Motor Truck Co. in the States of Washington, Oregon and Idaho. Beardsley has been associated with several large distributing companies on the Pacific coast and is well known in the truck industry.

Harper-Libby Co., Inc., Boston, has been appointed distributor of Winther motor trucks in eastern Massachusetts.

A. J. Landrum, Laredo, Tex., has been appointed distributor of Winther motor trucks for southern Texas and the States in northern Mexico.

Walter Deisher, formerly of the Reo sales agency, Ottawa, Ont., has been busy completing the arrangements for the formation of a company with an authorized capital of

\$50,000 to be known as the Automotive Sales & Service, Ltd. The company will handle distribution and sales for Reo.

Auto Equipment Co. of Wilmington, Del., distributors of the Philadelphia Diamond Grid battery, has been allotted all of the State of Delaware and the peninsula counties of Maryland and Virginia. **Francis McCartney** has been given the same territory for the Hartford battery.

Harper & Harper, Philadelphia, have been appointed agents in that territory for Handley-Knight cars.

W. H. Van Dervoort Dies

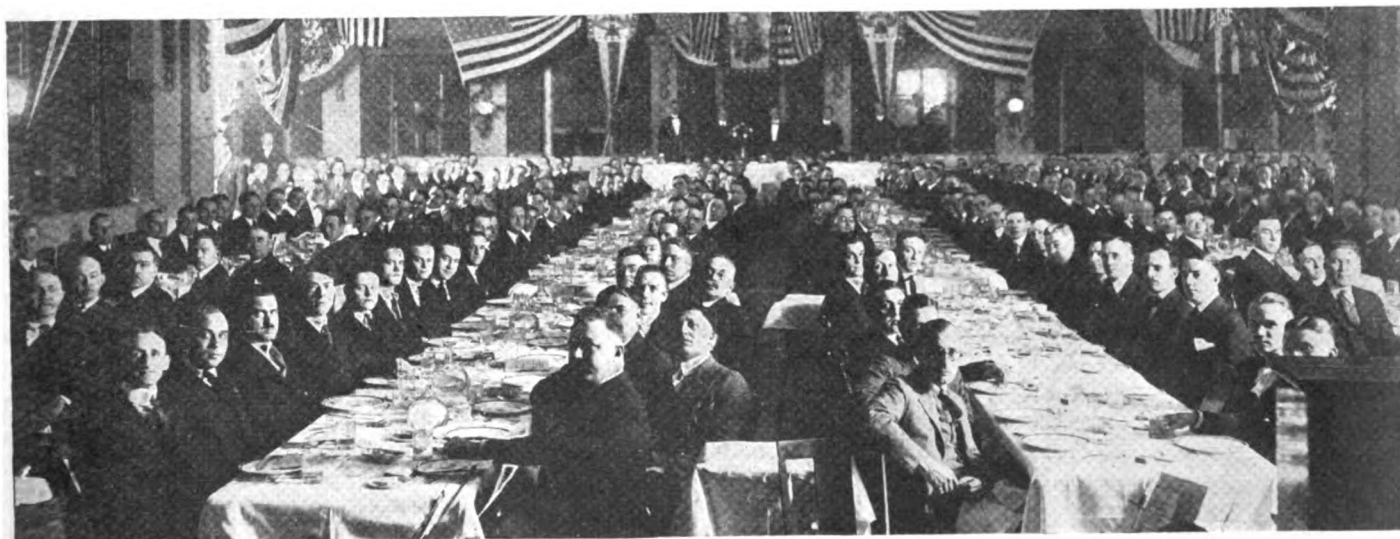
MOLINE, ILL., March 4—**W. H. Van Dervoort**, head of the R. & V. industries in East Moline, died Feb. 25, at the age of 52 years. Death occurred at his home in Moline following a year's illness. For 22 years he had been in partnership with **O. J. Root** in the manufacture of gasoline engines and automobiles.

Mr. Van Dervoort was born Feb. 28, 1869, in Ypsilanti, Mich. He attended Cornell after graduating from the mechanical engineering department of the Michigan Agricultural College. He was an instructor in Michigan and later assistant professor of mechanical engineering in the University of Illinois until 1899, when he went into partnership with his former roommate and classmate. The first factory was in Champaign, but in two years the industry was transferred to East Moline, where it has since been located.

ROLAND ROHLFS, noted aviator, who established an altitude mark of 34,610 feet at Garden City, has given up flying to embark in the more stable profession of selling cars. He has joined the force of the Ostendorf Motor Car Corp., Franklin distributor in Buffalo.

Rohlf's is the son of **Anna Katherine Green**, writer of mystery stories.

The Louisville Association Dinner



A well planned and effectively advertised show awakened public interest and started buying in the Louisville territory last month. More than 400 dealers and distributors, business and professional men attended the Louisville Automobile Dealers Association dinner show week

COMING EVENTS

SHOWS

- Wheeling, W. Va.....March 10-11....Annual Automobile Show, Wheeling Automobile Dealers' Ass'n, Auditorium, G. M. Ford, Mgr.
- Pendleton, Ore.....March 10-12....Annual Automobile Show, Pendleton Automobile Ass'n, Happy Carmon, J. B. Knight, Mgr.
- Fort Wayne, Ind.....March 10-16....Annual Automobile Show, Concordia College.
- Antigo, Wis.....March 11-13....Annual Automobile Show, Langlade County Automobile Dealers' Association, Armory.
- Newark, N. J.....March 12-19....Annual Automobile Show, New Jersey Automobile Exhibition Co., Armory.
- BostonMarch 12-19....Annual Automobile Show, Boston Automobile Dealers' Ass'n, Mechanic Bldg. and South Armory.
- Richmond, Va.....March 12-19....Annual Automobile Show, Richmond Automotive Trade Ass'n, Gray's Armory, J. A. Kline, Mgr.
- Scranton, Pa.....March 14-17....Truck and Tractor Show, Scranton Motor Trades Ass'n, Armory, H. B. Andrews, Mgr.
- Omaha, Neb.....March 14-19....Annual Automobile Show, Omaha Automobile Trade Ass'n, Omaha Auditorium, C. G. Powell, Mgr.
- WashingtonMarch 14-19....Annual Automobile Show, Washington Automotive Trade Ass'n, Convention Hall, Rudolph Jose, Chmn.
- Halifax, N. S.....March 14-19....Easton Canada's Patriotic Motor Show, Armories.
- Wilkes-Barre, Pa.....March 14-19....Passenger Car Show, March 21-26....Truck Show, Automobile Dealers' Ass'n of Wilkes-Barre, Inc.
- Great Falls, Mont.....March 15-19....Annual Automobile Show, Montana Distributors Ass'n, Hotel Rainbow, A. J. Breitenstein, Mgr.
- Greenville, S. C.....March 16-19....Annual Automobile Show, Greenville Dealers' Ass'n, Textile Hall.
- Uniontown, Pa.....March 16-19....Annual Automobile Show, Uniontown Automotive Dealers' Ass'n, Motor Square Garage.
- DetroitMarch 19-26....Annual Automobile Show, Detroit Automobile Dealers' Ass'n, Morgan-Wright Building.
- Torrington, Conn.....March 20-26....Annual Automobile Show, Armory, J. J. Callahan, Mgr.
- Deadwood, S. D.....March 21-26....Annual Automobile Show, Deadwood Business Men's Ass'n, Auditorium.
- Cedar Rapids, Iowa....March 21-26....Annual Automobile Show, Linn County Motor Trades Bureau, Auditorium, E. L. McKibben.
- Fort Worth, Texas....March 21-26....Annual Automobile Show, Fort Worth Automobile Trade Ass'n, First Baptist Church Auditorium, A. T. Lowry, Mgr.
- Norfolk, Va.....March 21-26....Annual Automobile Show, Norfolk Automobile Dealers', Monticello Hotel, J. W. Gates, director.
- Oneonta, N. Y.....March 21-26....Annual Automobile Show, State Armory, J. J. Callahan, Mgr.
- Ottumwa, Iowa.....March 23-26....Annual Automobile Show, Wapello County Motor Trades Bureau, Davis Bldg., F. T. Lynch, Mgr.
- Columbia, S. C.....Mar. 28-Apr. 2....Annual Automobile Show, Columbia Automotive Trade Ass'n, State Fair Bldg., J. M. Green, Mgr.
- Greenfield, Mass.....Mar. 28-Apr. 2....Annual Automobile Show, Greenfield Automobile Dealers' Ass'n, G. T. D. Factory, G. E. Graham, Mgr.
- Bridgeton, N. J.....April 2-9....Annual Automobile Show, Bridgeton Automotive Ass'n.
- DenverApril 3-9....Annual Automobile Show, Auditorium.
- Gloversville, N. Y.....April 4-9....Annual Automobile Show, Armory, J. J. Callahan, Mgr.
- SeattleApril 4-9....Annual Automobile Show, Motor Car Dealers' Ass'n, Arena-Hippodrome, W. J. Coyle, Mgr.
- Charlotte, N. C.....April 11-16....Annual Automobile Show, Charlotte Automotive Trade Ass'n, W. M. Jones, Sec'y.
- Red Bank, N. J.....April 16-23....Annual Automobile Show, Monmouth County Automobile Dealers' Ass'n, Armory.
- Goldsboro, N. C.....April 20-23....Automobile and Industrial Exhibit, Goldsboro Automotive Trade Ass'n, W. C. Denmark, Mgr.

CONVENTIONS

- Buffalo, N. Y.....March 17-19....Semi - Annual Convention, Factory Service Managers, Auspices Service Committee, N. A. C. C.

RACES

- Uniontown, Pa.....June 18.....Speedway Events.
- Uniontown, Pa.....Labor Day.....Autumn Classic.

WISCONSIN ASSOCIATION NAMES FIRST OFFICERS

MILWAUKEE, March 5—Charles W. Collier of Green Bay, Wis., was elected president of the Wisconsin Automotive Dealers' Association at the first meeting of the board of directors which was elected by a mail referendum during the early part of February. A. H. Thom of Oshkosh was elected vice-president, and Guy R. Wood of Eau Claire, treasurer. Bart J. Ruddle, executive secretary and manager of the Milwaukee Automotive Dealers Association, was selected for the same position in the State association.

The members of the board, numbering eleven, one from each congressional district, are: A. H. Dahl, Kenosha; A. F. Raab, Sheboygan; Louis Schoelkopf, Madison; A. W. L. Gilpin, Milwaukee; Thomas C. McMillen, Milwaukee; A. H. Thom, Oshkosh; M. D. Cameron, La Crosse; K. J. Reams, Wausau; C. W. Collier, Green Bay; G. R. Wood, Eau Claire; D. S. Webb, Superior. A membership campaign is now being conducted.

LIVERY STABLES PASS IN DIXON, ILLINOIS

DIXON, ILL., March 4—Dixon, center of a farming community, has given up its last livery stable, the automobile having driven the horse out. Horses, buggies and harness were offered at auction last week.

Stearns Business Increases

CLEVELAND, March 5—Profits of the F. B. Stearns Co. for 1920 exceeded those of 1919 by about 10 per cent, stockholders were informed at the annual meeting. Business for January was as good as in the same month of 1920, and the company now is operating at about 95 per cent of normal. The parts business has been entirely satisfactory and the company now makes every part that goes into the Stearns car.

FACTORY SERVICE HEADS TO CONVEIN IN MAY

NEW YORK, March 5—Plans are being completed for the semi-annual convention of factory service managers under the auspices of the service committee of the National Automobile Chamber of Commerce. It has been decided to hold this convention in Buffalo, May 17, 18 and 19. The headquarters will probably be at the Hotel Iroquois. Among the subjects under consideration are:

- Advantages and disadvantages of the unit replacement system for continuous service.
- Service equipment.
- Service department organization.
- Growth and responsibilities of the service department.
- Field organization.
- Relation between the engineer and the service department.
- Better co-operation between equipment service stations and dealer service stations for the benefit of the owner.

Other topics will be added later.

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity			
Alto-Chalm.	6-12		2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	G-O	14-28	1485	4	Wauk.	4-4 1/2 x 5 1/2	GorK	3	Port Huron	A	12-25	1700	4	Chief	4-4 1/2 x 6	G.K	3		
Alto-Chalm.	18-30		4	Own	4-4 1/2 x 6 1/2	G.K	4	Grain Belt	18-36	2500	4	Wauk.	4-4 1/2 x 6 1/2	GorK	4	Post	D	12-20		4	Wauk	4-4 1/2 x 5 1/2	GorK	2		
Allwork	14-28		4	Own	4-4 1/2 x 6	GorK	3	Gray	18-36		3	Wauk	4-4 1/2 x 6 1/2	Gas.	4	Prairie Dog	L	9-18		3	Wauk	4-3 1/2 x 5 1/2	Gas.	2		
Allwork	14-28		4	Own	4-5 x 6	GorK	3	Ground Hog	19-31	2800	4	Erd.	4-4 x 6	GorK	3	Prairie Dog	D	15-30		4	Wauk	4-4 1/2 x 6 1/2	Gas.	3		
Andrews-Kin.	18-36	\$2500	4	Clim.	4-5 x 6 1/2	GorK	4	Gt. Western St	20-30	1950	4	Beav.	4 1/2 x 6	K.	4											
Ans.	3-5		4	Own	1-4 1/2 x 5 1/2	Gas.	2-3	Hart-Parr	30	1595	4	Own	2-6 1/2 x 7	K.D	3	Ranger Cal.	A	8-16	1250	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1		
Appleton	12-20	1500	4	Buda	4-4 1/2 x 5 1/2	G.K	2-3	Heider	D	9-16	4	Wauk	4-4 1/2 x 5 1/2	G.K	2	Reed		15-30	2185	4	Dom	4-4 1/2 x 6	K.	3-4		
Ashtman-T.	15-30		4	Clim.	4-5 x 6 1/2	G.K	4	Heider	C	12-20	4	Wauk	4-4 1/2 x 6 1/2	G.K	3	Reliable		10-20	985	4	Own	2-6 x 7	Ker.	2		
Ashtman-T.	22-45		4	Own	4-5 1/2 x 6	G.K	6	Heider	Calit	6-10	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Rex		12-25	1600	4	Wauk	4-4 1/2 x 5 1/2	GorK	3		
Ashtman-T.	30-60		4	Own	4-7 x 9	G.K.D	8	Hicks		15-30	1750	4	Heider	4-4 1/2 x 6	GorK	4										
Automot. B-3.	12-24	1785	4	Here	4-4 x 5 1/2	Gas.	2-3	Huber		12-25	4	Wauk	4-4 1/2 x 5 1/2	GorK	3	Samson	M		1060	4	Nov.	4-4 x 5 1/2	G.K	2		
Avery-SR.	5-10		4	Own	4-3 x 4	G.K	2	Illinois	C	18-36	2375	4	Clim.	4-5 x 6 1/2	G.K	4	Sandusky	J	10-20		4	Own	4-4 1/2 x 5 1/2	G.K.D	2	
Avery-Cal.	5-10		3	Own	6-3 x 4	G.K	2	Imperial	E	40-70	5000	4	Own	4-7 1/2 x 9	G.K.D	10	Sandusky	E	15-35		4	Own	4-5 x 6 1/2	G.K.D	4	
Avery	5-10		4	Own	4-3 x 4	G.K	2	Indiana	F	5-10		4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	Shawnee		6-12		2	LeR.	4-3 1/2 x 4 1/2	G.K	4	
Avery	8-16		4	Own	2-5 1/2 x 6	G.K.D	2-3	International		8-16	4	Own	4-4 1/2 x 5	G.K.D	2	Shawnee		9-18		2	Gray	4-3 1/2 x 5	G.K	4		
Avery	12-25		4	Own	2-6 1/2 x 7	G.K.D	3-4	International		15-30	4	Own	4-5 1/2 x 8	G.K.D	4	Shelby	C	10-20		4	Erd.	4-4 x 6	GorK	2-3		
Avery	14-29		4	Own	4-4 1/2 x 7	G.K.D	3-4									Shelby	D	15-30		4	Beav.	4-4 1/2 x 6	G.K	3		
Avery	18-36		4	Own	4-5 1/2 x 8	G.K.D	4-5									Short Turn		15-30	1500	3		4-4 1/2 x 6	G.K	3		
Avery	25-50		4	Own	4-6 1/2 x 7	G.K.D	5-6									Square T.	A	18-35	2075	3	Clim.	4-5 x 6 1/2	K.G	3		
Avery	45-65		4	Own	4-7 1/2 x 8	G.K.D	8-10	J-T	N	16-30	*2		4-4 1/2 x 6	G.K		Steady Pull		12-23	1485	4		4-4 x 5	G.K	4		
								Kardell Util		12-25	1650	4	Midw.	4-4 1/2 x 5 1/2	GorK	3	Stinson	4E	18-36		4	Beav.	4-4 1/2 x 6	G.K	4	
								Koch-Gen		15-30	1650	4	Own	2-7 1/2 x 8	G.K	3	Stone		20-40		4	Beav.		G.K	4	
Bates All St.	15-25		4	Own	4-4 1/2 x 6	Ker.	3	Klumb	F	16-32		4	Clim.	4-5 x 6 1/2	G.K	1	Tiegs	T3	15-27	2625	4	Wisc.	4-4 1/2 x 6	Gas.	3-4	
Bates	S.M.		*4	Own	4-4 1/2 x 6	G.K.D	3	LaCrosse	M	7-12	900	4	Own	2-4 x 6	G.K	1	Titan		10-20		4	Own	2-6 1/2 x 8	G.K.D	3	
Beane			4	Own	14-3 1/2 x 4	G.K	2-3	LaCrosse	H	12-24	1250	4	Own	2-6 x 7	GorK	3	Tillman	A	2-6	385	4	Vur.	1-4 x 4	G.K	3	
Beeman	G	340	4	Own	1-3 1/2 x 4 1/2	Gas.	4 1/2	Laurel	21	15-30		4	Beav.	4-4 1/2 x 6	GorK	3-4	Tipp	B	30-45	4000	4	Wauk	4-4 1/2 x 6 1/2	Gas.	3-4	
Best	30	20-30	3250	*2	Own	4-4 1/2 x 6 1/2	G.K.D	4 1/2	Leader	B	12-20	4	Clim.	2-6 x 6 1/2	G.K.D	2-3	Torr		6-12	950	4	LeR.	4-3 1/2 x 4 1/2	Gas.	2	
Best	60	35-60	5750	*2	Own	4-6 1/2 x 8	G.K.D	8-10	Leader	N	16-32	4	Clim.	4-5 x 6 1/2	G.K.D	3-4	Traylor	T	6-12	815	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1	
Boring			3	Wauk	4-4 1/2 x 5 1/2	GorK	2	Leader	C	18-36		4	Clim.	4-5 x 7 1/2	G.K.D	4-6	Triumph	H	18-36	2450	2	Erd.	4-4 1/2 x 6	Ker.	4	
Bull			3	Toro.	2-5 1/2 x 7	G.K	3	Leonard	E	20-30	2530	4	Buda	4-4 1/2 x 6	G.K	3	Turner		14-25	1695	4	Buda	4-4 1/2 x 5 1/2	G.K	3	
Burn-Oil	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3	Liberty	A	18-32	2475	4	Clim.	4-5 x 6 1/2	G.K	4	Twin City		12-20		4	Own	4-4 1/2 x 6	G.K	3	
								Little Bear		4	850	4	Ford	4-3 1/2 x 4	Gas.	4	Twin City		20-35		4	Own	4-5 1/2 x 6 1/2	G.K	5	
Capital			2	Own	4-4 1/2 x 6	Gas.	33	Little Giant	B	16-22	2200	4		4-4 1/2 x 5	K.	4	Twin City		40-65		4	Own	4-7 1/2 x 9	G.K	8	
Case			4	Own	4-3 1/2 x 5	GorK	2	Little Giant	A	26-35	3300	4		4-5 1/2 x 6	K.	6										
Case			4	Own	4-4 1/2 x 6	GorK	3	Lombard		85-150	*2		6-5 1/2 x 6 1/2	Gas.	16											
Case			4	Own	4-5 1/2 x 6 1/2	GorK	4-5	Macultivator		1 1/2	225	2	Own	1-2 1/2 x 3 1/2	Gas.		Uncle Sam C20		12-20	1385	4	Wid	4-4 x 5 1/2	GorK	2-3	
Caterpillar T11			*2	Own	4-4 1/2 x 6	Gas.	4	Magnet	B	14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	K&G	3	Uncle Sam B19		20-30	2300	4	Beav.	4-4 1/2 x 6	GorK	3-4	
Caterpillar T16			*2	Own	4-6 1/2 x 7	G.K	6	Market		2-4 1/2		4	Vur.	1-4 x 4	Gas.	2	Universal		1-4	475	2	Own	1-3 1/2 x 5	G	1	
Chase			3	Buda	4-4 1/2 x 5 1/2	GorK	2-3	Master Jr		4-8		4	LeR.	2-3 1/2 x 4	Gas.	1	Utiliter	561	2 1/2-4	380	4	Own	1-3 1/2 x 4 1/2	G	5-6	
Cletrac			*2	Own	4-4 x 5 1/2	G.K.D	2-3	Merry Gar		2	230	2	Evin	1-2 1/2 x 2 1/2	Gas.											
Dakota			4	Dom.	4-4 1/2 x 6	Gas.	3	Minne	All-P	12-25	1325	4	Own	4-4 1/2 x 7	GorK	3	Velle		12-24	1750	4	Own	4-4 1/2 x 5 1/2	G.K.D	3	
Dart	B.J.		3	Dom.	4-4 1/2 x 6	Gas.	3-4	Mohawk		9-16	785	4	Light	4-3 1/2 x 4 1/2	GorK	1-2	Victory		9-18	1385	4	Gray	4-3 1/2 x 5	Gas.	2	
Dupont	A	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	4	Moline Univ	D	9-18	1325	2	Own	4-3 1/2 x 5	Gas.	2	Victory		15-30	1750	4	Wauk	4-4 1/2 x 5 1/2	Gas.	3
Dul	D	20	2490	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Moline Orch		9-18	1375	2	Own	4-3 1/2 x 5	Gas.	2-3	Vim		15-30	1695	4	Wauk	4-4 1/2 x 5 1/2	G.K	3
Do-In-All			595	4	Own	1-4 1/2 x 5	Gas.	5-6	Monarch		30-18	3250	*2	Beav.	4-4 1/2 x 6	Ker.	4	Wallis	K	15-25		4	Own	4-4 1/2 x 5 1/2	G.K	3
								Motor		15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3	Waterloo	N	12-25		4	Own	2-6 1/2 x 7	G.K	3	
Engle	F	12-22	1390	4	Own	2-7 x 8	GorK	3-4	New Britain	1	3-6	4	Own	2-3 1/2 x 4	Gas.	3 1/2	Webfoot		28-53	5250	*2	Wisc.	4-5 1/2 x 7	G.D	6	
Engle	F	16-30	1850	4	Own	2-8 x 8	GorK	4-5	New Britain	2	3-6	4	Own	2-2 1/2 x 4	Gas.	3 1/2	Wellington	B	12-22		4	Erd.	4-4 x 6	Ker.	2-3	
E-K			12-50	4	Own	4-4 1/2 x 5	GorK	4	Nilson Spec		10-20	4	Wauk	4-3 1/2 x 4 1/2	Gas.	2	Wellington	F	16-30		4	Chief	4-4 1/2 x 6	Ker.	3-4	
Evans			18-30	2000	4	Buda	4-4 1/2 x 6	G.K	3	Nilson Senior		20-40	5	Wauk	4-5 x 6 1/2	G.K	4	Wetmore		12-25	1650	4	Wauk	4-4 x 5 1/2	G.K	2-3
Fagel	D	9-12	1525	4	Lyc.	4-3 1/2 x 5	Gas.	2	Oil Pull		12-20	4	Own	2-6 x 8	K.D	3	Whitney		9-18	1175	4	Own	2-5 1/2 x 6 1/2	Gas.	2	
Farm Horse			18-30	1885	4	Clim.	4-5 x 6 1/2	G.K	3-4	Oil Pull		16-30	4	Own	2-7 x 8 1/2	K.D	4	Wichita	T	15-30	2500	4	Beav.	4-5 1/2 x 6	G.K.D	3-4
Farguhar			15-25		4	Buda	4-4 1/2 x 6	G.K.D	3-4	Oil Pull		20-40	4	Own	2-8 x 10	K.D	5-6	Wisconsin	E	16-30	2250	4	Clim.	4-5 x 6 1/2	G.K.D	4
Farguhar			18-35		4	Own	4-6 x 8	G.K.D	4-5	Oil Pull		30-60	4	Own	2-10 x 12	K.D	8-10	Zelle		12-25		4		4-4 1/2 x 5 1/2	GorK	3
Farguhar			25-50		4	Own	4-7 x 8	G.K.D	6-7	Oldsmar		3-5	395	4	Own	1-5 1/2 x 5 1/2	G.K.D	3 1/2								
Fick			20-35		4	Clim.	4-5 x 6 1/2	GorK	3-4	Oliver	A	15-30	*2	Beav.	4-4 1/2 x 6	GorK	3-4									
Flour City			20-35		4	Own	4-5 1/2 x 6	Ker.	4-6																	
Flour City			30-50		4	Own	4-6 1/2 x 7	Ker.	6-8																	
Flour City			40-70		4	Own	4-7 1/2 x 9	Ker.	8-11	Parrett	K	15-30		4	Pitt	4-4 1/2 x 6	G.K	3								
Fordson			-18	790	4	Own	4-3 1/2 x 4	G.K	2																	

Specifications of Current Models of Passenger Cars

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy.	6-3 1/2 x 5	123	32x4	\$2260	\$2260	....	\$3680	\$3680
Allen.....Series 43	Ow.	4-3 1/2 x 5	110	32x4	†1395	1395	....	2395	2395
Ambassador.....R	Ow.	12-2 1/2 x 5	136	32x4 1/2	....	....	....	....	....
American.....C	H-S.	6-3 1/2 x 5	127	32x4	2395	2395	\$2475	3295	3495
Anderson.....Series 40	Cont.	6-3 1/2 x 4 1/2	120	33x4	2195	1795	1845	2795	2795
Apperson.....8-21-S	Ow.	8-3 1/2 x 5	130	34x4 1/2	....	†3500	3500	4500	4500
Apperson.....Anniversary	Ow.	8-3 1/2 x 5	130	34x4 1/2	....	†4250	4250	6000	6000
Auburn.....6-39	Cont.	6-3 1/2 x 4 1/2	120	32x4	1745	1695	†1695	2795	2795
Beggs.....20T	Cont.	6-3 1/2 x 4 1/2	120	33x4	1885	1885	....	2785	2885
Bour-Davis.....21S	Cont.	6-3 1/2 x 5 1/2	126	33x4 1/2	†2585	....	2585	....	....
Bradley.....Four	Ow.	4-4 x 5 1/2	125	32x4 1/2	†7900	9000	....	10500	10500
Brewster.....91	Ow.	4-3 1/2 x 5	109	31x4	1285	1285	....	1885	1885
Briscoe.....4-34	Ow.	6-3 1/2 x 4 1/2	118	33x4 1/2	1795	1795	....	2585	2895
Buick.....21-44-5-6-7	Ow.	6-3 1/2 x 4 1/2	124	24x4 1/2	....	....	2065	2985	3295
Buick.....21-48-9-50	Ow.	6-3 1/2 x 4 1/2	124	24x4 1/2	....	....	....	....	....
Cadillac.....59	Ow.	8-3 1/2 x 5 1/2	132	35x5	3790	†3790	....	4950	4950
Case.....V	Ow.	6-3 1/2 x 5 1/2	126	34x4 1/2	....	†2650	2650	3400	3750
Chalmers.....6-30	Ow.	6-3 1/2 x 4 1/2	117	32x4	1795	1795	1945	2595	2745
Chalmers.....6-30	Ow.	6-3 1/2 x 4 1/2	122	33x4 1/2	....	....	1945	....	....
Champion.....Tourist	Lyeom.	4-3 1/2 x 5	113	32x3 1/2	....	1250	....	....	....
Champion.....Special	H-S.	4-3 1/2 x 5	118	32x4	†1595	1595	....	....	....
Chandler.....Ow.	Ow.	6-3 1/2 x 5	123	33x4	†1930	†2010	1930	2930	3030
Chevrolet.....490	Ow.	4-3 1/2 x 4	102	50x3 1/2	795	820	....	1325	1375
Chevrolet.....FB	Ow.	4-3 1/2 x 5 1/2	110	33x4	1320	1345	....	2075	2075
Cleveland.....40	Ow.	6-3 x 4 1/2	112	32x4	1465	1465	....	2375	2475
Climber Six.....S	H-S.	6-3 1/2 x 5	125 1/2	32x4 1/2	2750	2750	....	....	....
Cole.....870	Nort.	8-3 1/2 x 4 1/2	127	33x5	3250	3250	3250	4250	4450
Columbia.....D-C & CS	Cont.	6-3 1/2 x 4 1/2	115	32x4	1945	1795	....	2895	2895
Comet.....C-53	Cont.	6-3 1/2 x 5 1/2	125	33x4 1/2	....	2350	2450	....	....
Commonwealth.....44	H-S.	4-3 1/2 x 5	117	32x4	....	1595	....	2465	....
Crawford.....21-6-40	Cont.	6-3 1/2 x 5 1/2	122 1/2	33x4	3000	3000	....	4500	....
Crow-Elkhart.....L63-65	Lye.	4-3 1/2 x 5	117	32x3 1/2	11295	1295	....	2195	....
Crow-Elkhart.....S63-65	H-S.	6-3 1/2 x 5	117	33x4	11545	1545	....	2395	....
Cunningham.....V-4	Ow.	8-3 1/2 x 5	132	35x5	6200	6200	6700	7600	7600
Daniels.....D-19	Ow.	8-3 1/2 x 5 1/2	132	34x4 1/2	†5350	†5350	5350	6250	6950
Davis.....51-57	Cont.	6-3 1/2 x 4 1/2	120	33x4	†1995	1895	†2150	2795	2795
Dispatch.....G	Ow.	4-3 1/2 x 5	120	34x4	1290	1350	1350	1525	1575
Dixie Flyer.....H-S-70	H-S.	4-3 1/2 x 5	112	32x4	1595	1595	....	2570	2570
Dodge Brothers.....Ow.	Ow.	4-3 1/2 x 4 1/2	114	32x3 1/2	1235	1285	....	1900	2150
Dorris.....6-80	Ow.	6-4 x 5	132	33x5	....	†4785	4785	5800	6690
Dort.....17-A	D-Ly.	4-3 1/2 x 5	108	31x4	1215	1215	....	1865	1995
Dupont.....A	Ow.	4-3 1/2 x 5 1/2	124	32x4 1/2	3400	†3400	....	4900	....
Elcar.....7-R	Cont.	6-3 1/2 x 4 1/2	117	33x4	†1795	1795	†1795	2500	2600
Elgin.....K-1	Falls.	6-3 1/2 x 4 1/2	118	33x4	†1895	1775	....	2685	2685
Essex.....A	Ow.	4-3 1/2 x 5	108 1/2	32x4	1595	1595	....	2100	2450
Ferris.....Cont.	Cont.	6-3 1/2 x 5 1/2	130	32x4 1/2	3350	....	†3350	4875	4875
Ford.....T	Ow.	4-3 1/2 x 4	100	30x3 1/2	395	440	....	745	705
Franklin.....9-B	Ow.	6-3 1/2 x 4	115	32x4	2700	2800	†2750	2950	3350
Friend.....Four	Ow.	4-3 1/2 x 4 1/2	112	32x3 1/2	1585	1585	....	2485	2585
Globe.....B-10	Supre.	4-3 1/2 x 5	115	32x4	....	....	....	....	....
Grant.....HX	Ow.	6-3 1/2 x 4 1/2	116	32x4	1550	1550	....	2450	2450
Gardner.....G	Lye.	4-3 1/2 x 5	112	32x3 1/2	†1195	1195	....	2145	2145
Halladay.....21	Rut.	6-3 1/2 x 5	116	33x4	....	2285	....	....	....
Handley-Knight.....K	Kn't.	4-4 1/2 x 4 1/2	125	32x4 1/2	....	....	2985	....	4185
Hanson Six.....60	Cont.	6-3 1/2 x 4 1/2	121	32x4	2365	2365	....	2465	3565
Hatfield.....A-42	H-S.	4-3 1/2 x 5	115	32x4	1695	1695	....	2595	....
Haynes.....47	Ow.	6-3 1/2 x 5	132	34x4 1/2	†3500	....	....	4250	....
Huffman.....R	Cont.	6-3 1/2 x 4 1/2	120	32x4	1995	1995	....	2975	....
H.C.S.....Series 3	Weid.	4-3 1/2 x 5 1/2	120	32x4 1/2	2925	†2975	....	3650	....
Holmes.....Series 4	Ow.	6-3 1/2 x 4 1/2	126	34x4 1/2	†3350	....	3350	4250	4550
Hudson Super 6.....O	Ow.	6-3 1/2 x 5	126	34x4 1/2	†2400	3625	2400	3275	3400
Hupmobile.....Series R	Ow.	4-3 1/2 x 5 1/2	112	32x4	1685	1685	....	2725	2800
Jackson.....638	Cont.	6-3 1/2 x 4 1/2	121	32x4 1/2	†2685	1950	....	3760	3760
Jordan.....M	Cont.	6-3 1/2 x 4 1/2	120	32x4	2650	2650	2875	3700	3700
Kenworthy.....8-90	Ow.	8-3 x 5 1/2	130	32x4 1/2	5000	5000	5250	....	....
King.....H	Ow.	8-3 x 5	120	32x4 1/2	2740	†2725	2725	4035	4035
Kissel.....45	Ow.	6-3 1/2 x 5 1/2	124	32x4 1/2	3475	†3475	2795	4275	4275
Kline Kar.....6-55-K	Cont.	6-3 1/2 x 4 1/2	121	33x4	2290	2290	†2290	3250	3200
LaFayette.....134	Ow.	8-3 1/2 x 5 1/2	132	33x5	....	5625	5625	7200	7400
Leach.....21-A-B-C	Cont.	6-3 1/2 x 5 1/2	128	32x4 1/2	†5700	5200	5700	....	....
Lexington.....Series S	Cont.	6-3 1/2 x 4 1/2	122	32x4	†2285	2285	....	3250	2785
Lexington.....Series T	Anst.	6-3 1/2 x 4 1/2	128	32x4 1/2	....	....	2985	4150	4250
Liberty.....10-C	Ow.	6-3 1/2 x 5	117	32x4	1795	1795	†1885	2825	2850
Lincoln.....Ow.	Ow.	8-3 1/2 x 5	130	33x5	4600	4600	4600	5750	6000
Locomobile.....Ow.	Ow.	6-4 1/2 x 5 1/2	142	35x5	....	†7650	7550	....	....
Lone Star.....Lye.	Lye.	4-3 1/2 x 5	....	....	....	....	....	....	....
Lorraine.....21-T	H-S.	4-3 1/2 x 5	114	32x4	1665	1665	....	2590	2590
Maibohm.....B	Ow.	6-3 1/2 x 4 1/2	116	32x4	1575	1575	....	2395	2395
Marmon.....34	Ow.	6-3 1/2 x 5 1/2	136	32x4 1/2	5300	†5000	5000	6150	6600
Maxwell.....25	Ow.	4-3 1/2 x 4 1/2	109	30x3 1/2	995	995	....	1595	1695
McFarlan.....1921	Ow.	6-4 1/2 x 6	140	33x5	6300	†6300	6300	7500	7500
Mercer.....Series 5	Ow.	4-3 1/2 x 6 1/2	132	32x4 1/2	3950	†3950	3950	5150	5650
Merit.....Walk	Ow.	6-3 1/2 x 4 1/2	119	32x4	2245	†2245	....	....	....
Meteor.....R & RR	Dues.	4-4 1/2 x 6	129	32x4 1/2	5500	5500	....	....	....
Metz.....M6	Rut.	6-3 1/2 x 5	120	32x4	1995	1995	....	2795	2805
Mitchell.....F-40	Ow.	6-3 1/2 x 5	120	33x4	†1750	1750	†1650	2800	2900
Mitchell.....E-42	Ow.	6x3 1/2 x 5	127	34x4 1/2	....	....	1950	....	....
Moon.....6-48	Cont.	6-3 1/2 x 4 1/2	122	32x4	2285	2185	2685	2985	2985
Murray.....Ow.	Ow.	8-3 1/2 x 5	128	34x4 1/2	....	3500	....	....	....
Nash.....681-6	Ow.	6-3 1/2 x 5	121	33x4	1695	1695	†1850	2650	2895
Nash.....682	Ow.	6-3 1/2 x 5	127	34x4 1/2	....	....	1875	1985	2185
Nash Four.....41-4	Ow.	4-3 1/2 x 5	112	32x3 1/2	1395	1395	....	1985	2185
National Sextet.....BB	Ow.	6-3 1/2 x 5 1/2	130	32x4 1/2	3750	†3750	3750	4900	4950
Nelson.....D	Ow.	4-3 1/2 x 4 1/2	104	32x4	....	1900	....	....	....
Noma.....1C	Cont.	6-3 1/2 x 4 1/2	128	32x4 1/2	3000	3200	....	4450	....
Norwalk.....430-KS	Lye.	4-3 1/2 x 5	116	32x3 1/2	....	1285	....	....	....
Oakland.....34-C	Ow.	6-2 1/2 x 4 1/2	115	32x4	1395	1395	....	2065	2065
Ogren.....6-60	Ow.	6-3 1/2 x 5 1/2	134	33x5	....	3500	3900	5000	5400
Oldsmobile.....43-A	Ow.	4-3 1/2 x 5 1/2	115	32x4	†1445	1445	....	2145	2145
Oldsmobile.....47	Ow.	8 1/2 x 4 1/2	....	32x4	....	1695	....	2395	2395
Overland.....4	Ow.	4-3 1/2 x 4	100	30x3 1/2	895	895	....	1425	1475
Packard.....Single-Six	Ow.	6-3 1/2 x 4 1/2	116	33x4 1/2	2975	2975	....	4150	4250
Packard.....Twin Six	Ow.	12-3 x 5	136	35x5	6000	†6000	6000	8200	8450
Paige.....6-42	Ow.	6-3 1/2 x 5	119	32x4	1735	1795	....	2600	2720
Paige.....6-66	Cont.	6-3 1/2 x 5	131	33x4 1/2	†2985	....	2895	3775	3850
Pan.....A	Ow.	4-3 1/2 x 5	108	33x4	....	1500	....	....	....
Pan American E & F-6-55	H-S.	4-3 1/2 x 5	121	33x4	2250	2250	....	....	....
Parenti.....1921	Ow.	8-2 1/2 x 4 1/2	123	34x4	....	2000	....	3000	....
Paterson.....650	Cont.	6-3 1/2 x 4 1/2	120	33x4	....	1895	1925	2895	2895
Peerless.....56-S-7	Ow.	4-3 1/2 x 5	116	32x4 1/2	....	†2990	†2990	3680	3950
Piedmont.....4-30	Lye.	4-3 1/2 x 5	116	32x3 1/2	....	1485	....	....	....
Piedmont.....6-40	Cont.	6-3 1/2 x 4 1/2	122	32x4	....	1945	....	....	....
Pierce-Arrow.....Ow.	Ow.	6-4 x 5 1/2	126	33x5	8000	†7500	7500	9000	9000
Pierce.....6-50	H-S.	6-3 1/2 x 5	126	32x4 1/2	2285	2285	....	3600	3600
Porter.....46	Ow.	4-4 x 6 1/2	142	35x5	6750	Chassi s Price	....	....	....
Premier.....6-D	Ow.	6-3 1/2 x 5 1/2	126 1/2	33x5	4600	†4600	4600	5600	6100
Premocor.....6-40 A	Falls.	6-3 1/2 x 4 1/2	117	32x3 1/2	....	1295	....	....	....
Premocor.....4-80	Dues.	4-4 x 6	117	32x4 1/2	....	3865	....	....	....
Raleigh.....A-6-60	H-S.	6-3 1/2 x 5	122	32x4 1/2	†2750	2750	....	3600	3700
Range.....A-20	Ow.	4-3 1/2 x 5	116	32x4	....	....	....	....	....
R & V Knight.....R	Ow.	4-3 1/2 x 5	116	32x4	....	2150	....	....	....
R & V Knight.....J	Ow.	6-3 1/2 x 4 1/2	127	32x4 1/2	3350	....	3350	4000	4200
Reo.....T-6									

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason, H	2 1/2	\$3500	4 1/2 x 5 1/2	36x4	36x4	W	Concord, BX	1 1/2	.....	4 1/2 x 5 1/2	36x4	36x3	W	Gramm-Bern., 65	1 1/2	\$2725	3 1/2 x 5	36x3 1/2	36x5	W
Acason, L	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5	W	Conestoga, 12	1 3/4	.....	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Gramm-Bern., 20	2	3175	4 1/2 x 5 1/2	36x4	36x7	W
Aca, C	1 1/2	2750	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Conestoga, 20	1	.....	3 1/2 x 5	34x3 1/2	34x5	W	Gramm-Bern., 25	2 1/2	3575	4 1/2 x 5 1/2	36x4	36x4 1/2	W
Aca, A	2 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Conestoga, 30	2	.....	3 1/2 x 5	36x4	36x4 1/2	W	Gramm-Bern., 35	3 1/2	4375	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Aca	3	3650	4 1/2 x 5 1/2	36x6	36x8	W	Cook, 41	1	\$3000	4 x 5 1/2	36x7	36x7 1/2	W	Gramm-Bern., 50	5	5275	4 1/2 x 5	36x6	40x6 1/2	W
Acme, B	1	2175	3 1/2 x 5	34x3 1/2	34x5	W	Corbitt, E	1	2400	3 1/2 x 5	34x3 1/2	34x4	W	Hahn, J4	1	.....	3 1/2 x 5	34x5	34x5	W
Acme, F	1 1/2	2475	3 1/2 x 5	34x3 1/2	34x5	W	Corbitt, D	1 1/2	2800	3 1/2 x 5	36x3 1/2	36x5	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Acme, A	2	3050	4 1/2 x 5 1/2	36x4	36x7	W	Corbitt, B	2	3500	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Acme, C	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x10	W	Corbitt, A	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x7	W	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W
Acme, E	5	5150	4 1/2 x 6	36x6	40x12	W	Corbitt, AA	3 1/2	4500	4 1/2 x 5 1/2	36x5	40x6 1/2	W	Hahn, EF	5	.....	4 1/2 x 6	36x6	40x12	W
Acme, G	3 1/2	1790	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Corbitt, AA	5	5500	4 1/2 x 5	36x6	40x6 1/2	W	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Alh-nMulti-Trk-20	1	.....	4 x 5 1/2	34x5	34x5	B	Dart, S	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7	W
Alh-Power, C	3 1/2	5300	4 1/2 x 6	36x7	36x10	W	Dart, M	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Hall	1 1/2	3100	3 1/2 x 5	34x5 1/2	36x7 1/2	W
Alh-American, B-1	1	1795	3 1/2 x 5	32x4	32x4	W	Dart, W	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x10	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W
Alh-American C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5 1/2	W
American, 25	2 1/2	3575	4 x 6	36x4	36x4 1/2	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Hall	5	5100	4 1/2 x 5 1/2	36x5	40x6 1/2	W
American, 40	4	4575	4 1/2 x 6	36x5	36x5 1/2	W	Day-Elder, D	2	2750	4 1/2 x 5 1/2	36x4	36x7	W	Hall	7	5100	4 1/2 x 5 1/2	36x5	40x6 1/2	C
Apez, G	1	1675	3 1/2 x 5	33x5 1/2	33x5 1/2	W	Day-Elder, E	3 1/2	2950	4 1/2 x 5	36x4	36x7 1/2	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	36x4 1/2	34x5	W
Apez, D	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	W	Day-Elder, F	2 1/2	3750	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Apez, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, F	3 1/2	4600	4 1/2 x 5	36x5	36x6 1/2	W	Harvey, WHA	3 1/2	4300	4 1/2 x 5	36x5	36x5 1/2	W
Apez, F	3 1/2	3975	4 1/2 x 6	36x5	36x10	W	Dearborn, E	1 1/2	2150	3 1/2 x 5 1/2	34x4	34x5	W	Harvey, WKA	5	5200	4 1/2 x 5	36x6	40x6 1/2	W
Armstrong, HW	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7 1/2	W	Dearborn, F	2	2590	3 1/2 x 5 1/2	34x5 1/2	34x7 1/2	W	Hawkeye, K	1 1/2	2385	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Armstrong, KW	3 1/2	.....	4 1/2 x 6	36x5	36x5 1/2	W	Defiance, D	1 1/2	2550	3 1/2 x 5	36x5 1/2	36x6 1/2	W	Hawkeye, M	2	2915	4 1/2 x 5 1/2	36x4	36x6 1/2	I
Armstrong, 20	1	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Defiance, E	2	2750	3 1/2 x 5	36x5 1/2	36x7 1/2	W	Hawkeye, N	3 1/2	4345	4 1/2 x 6	36x5	36x10 1/2	I
Atco, B	1 1/2	.....	3 1/2 x 5 1/2	34x5	36x6	I	DeKalb, E2	2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5	W	Hendrickson, I	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7 1/2	W
Atco, B1	1 1/2	.....	3 1/2 x 5 1/2	34x5 1/2	36x6 1/2	I	DeKalb, E2 1/2	2 1/2	2600	4 1/2 x 5 1/2	36x4	36x6	W	Hendrickson, J	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Atco, A	2 1/2	.....	4 1/2 x 5 1/2	36x4 1/2	36x8	W	Denby, 12	1	2400	3 1/2 x 5	36x5 1/2	36x6 1/2	W	Highway, A10	4	.....	4 x 6	36x5	36x6 1/2	W
Atlas, (York)	.....	.....	.....	.....	.....	.....	Denby, 33	1 1/2	2300	3 1/2 x 5	36x5 1/2	36x7 1/2	W	Highway, BS10	4	.....	4 x 6	36x5	40x6 1/2	W
Dispatch, C1	1	.....	3 1/2 x 5	32x4 1/2	32x4 1/2	W	Denby, 134	2	2800	3 1/2 x 5	36x5 1/2	36x7 1/2	W	Higra, A18	1	2100	3 1/2 x 5	35x5 1/2	35x5 1/2	W
Attorbury, 20R	1 1/2	.....	3 1/2 x 5	34x3 1/2	34x5	W	Denby, 25	3	3600	4 1/2 x 5 1/2	36x4	36x7	W	Higra, B20	1 1/2	2500	4 1/2 x 5 1/2	35x5 1/2	36x6 1/2	W
Attorbury, 7CX	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x4 1/2	W	Denby, 27	4	4600	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Huffman, B	1 1/2	2075	3 1/2 x 5	34x3 1/2	34x6	W
Attorbury, 7D	3 1/2	.....	4 1/2 x 5 1/2	36x5	40x5 1/2	W	Denby, 210	5	5350	4 1/2 x 5 1/2	36x6	40x6 1/2	W	Huffman, C	1 1/2	1875	3 1/2 x 5 1/2	34x3 1/2	34x6	I
Attorbury, 8E	5	.....	4 1/2 x 6	36x5	40x6 1/2	W	Dependable, A	1	1650	3 1/2 x 5	34x5	36x6	W	Harburt	2 1/2	.....	4 x 6 1/2	34x4	34x5	W
Antocar, 21UF	2	2300	4 1/2 x 4 1/2	34x4	34x5	D	Dependable, C	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Harburt	3 1/2	.....	4 1/2 x 6	36x5	36x5 1/2	W
Antocar, 21UG	2	2400	4 1/2 x 4 1/2	34x4	34x5	D	Dependable, D	2	2650	4 x 5 1/2	34x5	36x6	W	Harburt	5	.....	4 1/2 x 6	36x5	40x6 1/2	W
Antocar, 26Y	3 1/2	4350	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Indep d't (Iowa), E	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Antocar, 26-S	3 1/2	4500	4 1/2 x 5 1/2	34x5	36x10	D	Dependable, G	2 1/2	3550	4 1/2 x 5	36x6	36x7	W	Indep d't (Iowa), F	2	.....	4 1/2 x 5 1/2	34x4	34x6	W
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	36x3 1/2	36x5	W	Diamond-T, T	1 1/2	2450	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Indep d't (Iowa), F	2	.....	3 1/2 x 5	34x3 1/2	34x4	W
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36x4	36x8	W	Diamond-T, U	2	2335	4 x 5 1/2	36x4	36x7	W	Indep d't (Ohio), F	1 1/2	2585	3 1/2 x 5	36x4	36x4 1/2	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5 1/2	W	Diamond-T, K	3 1/2	3925	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Indep d't (Ohio), H	1 1/2	3285	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Available, H5	5	5575	4 1/2 x 6	36x6	40x12	B	Diamond-T, EL	5	4615	4 1/2 x 5 1/2	36x6	40x6 1/2	W	Indep d't (Ohio), K	1 1/2	4285	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Available, H7	7	6975	5 x 6	36x6	40x14	B	Diamond-T, S	5	4800	4 1/2 x 5	36x6	40x6 1/2	W	Indiana, 12	1 1/2	2290	3 1/2 x 5 1/2	34x3 1/2	34x5	W
Avery	1	.....	3 x 4	34x5 1/2	34x5 1/2	I	Doane	2 1/2	.....	4 1/2 x 5 1/2	36x5	36x7	C	Indiana, 25	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7 1/2	W
Buck, A. Jr.	1	1300	3 1/2 x 5	34x3 1/2	34x4	I	Doane	3	.....	4 1/2 x 5 1/2	36x6	40x6 1/2	C	Indiana, 35	3 1/2	3750	4 1/2 x 5 1/2	36x4	36x8 1/2	W
Buck, C	2	2550	4 1/2 x 5 1/2	36x4	36x6	I	Dodge, C	1 1/2	1085	3 1/2 x 4 1/2	35x4 1/2	35x4 1/2	B	Indiana, 51	5	4775	5 x 6 1/2	36x5	40x6 1/2	W
Bell, O	2 1/2	2750	4 1/2 x 5 1/2	34x4	34x7	I	Dorris, K-4	2	3400	4 1/2 x 5 1/2	36x4	36x7	W	Island, D	2	2950	4 x 6	34x5	34x6	I
Bell, E	1 1/2	2250	3 1/2 x 5 1/2	34x3 1/2	34x5 1/2	I	Dorris, K-7	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x10	W							

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive
				Front Rear						Front Rear						Front Rear	
Lion, L	1 1/2	\$2200	3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	W	Pierce-Arrow, W2	3 1/2	\$4950	4 1/2 x 6 1/2	36x5 36x5d	W	Superior, E	2		4 1/2 x 5 1/2	36x4 36x6	I
Lone Star, 9	1 1/2	1545	3 1/2 x 5 1/2	32x5 1/2 32x5 1/2	I	Pierce-Arrow, R10	5	5700	3 1/2 x 5 1/2	32x4 1/2 32x4 1/2	W	Super Truck, 50	2 1/2	\$3300	4 x 6	36x4 36x8	W
Leadingham, K	1	2790	4 1/2 x 5 1/2	38x4 38x7	W	Pioneer, AA	1	1550	3 1/2 x 5 1/2	32x4 1/2 32x4 1/2	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5 40x5d	W
Leadingham	1 1/2		3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	W	Pittsburgh, B	2 1/2	3700	4 1/2 x 5 1/2	36x5 36x7	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5 40x12	W
Maccar, L2	1 1/2	2925	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Pony	3 1/2	400	2 1/2 x 4	28x3 28x3	C	Super Truck, 150	7 1/2		5 x 8	36x6 40x12	W
Maccar, H-2	1 1/2	3550	4 1/2 x 5 1/2	36x4 36x4d	W	Power, F	1 1/2		3 1/2 x 5 1/2	36x6 36x6	W	Texas, A35	1 1/2		3 1/2 x 5 1/2	33x4 35x7	I
Maccar, M-2	3 1/2	4500	4 1/2 x 6	36x5 36x5d	W	Premier, C-B-143	1 1/2		4 1/2 x 5 1/2	36x5 36x5	W	Texas, TK39	1 1/2		3 1/2 x 5 1/2	36x6 36x7	W
Maccar, G	5	5500	4 1/2 x 6	36x5 40x6d	W	Rainier, R-11	1 1/2	2150	3 1/2 x 5 1/2	35x5 35x5	W	Texas, TK	1 1/2		3 1/2 x 5 1/2	36x6 36x7	W
MacDonald, A	15	5750	4 1/2 x 6	40x7 40x14	I	Rainier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36x5 36x5d	W	Tiffin, F15	1 1/2	2895	4 1/2 x 5 1/2	36x3 1/2 36x5	W
Mac, AB	1 1/2	3450	4 x 5	36x4 36x3 1/2	D	Rainier, R-19	1	2350	4 1/2 x 5 1/2	34x3 1/2 31x4	W	Tiffin, F25	2 1/2	3380	4 1/2 x 5 1/2	36x4 36x3 1/2	W
Mac, AB	1 1/2	3000	4 x 5	36x4 36x3 1/2	C	Rainier, R-16	1 1/2	2600	4 1/2 x 5 1/2	34x3 1/2 34x5	W	Tiffin, F35	3 1/2	4780	4 1/2 x 5 1/2	36x5 40x5d	W
Mac, AB	2	3300	4 x 5	36x4 36x4d	C	Rainier, R-18	2	2950	4 1/2 x 5 1/2	34x4 34x6	W	Tiffin, F50	5	5850	4 1/2 x 6	36x6 40x6d	W
Mac, AC	2	3750	4 x 5	36x4 36x4d	C	Rainier, R20	2 1/2	2950	4 1/2 x 5 1/2	34x4 34x7	W	Titan, HT	3 1/2	4500	4 1/2 x 6	34x4 40x5d	I
Mac, AC	3 1/2	4950	5 x 6	36x5 40x5d	C	Rainier, R17	5	5250	4 1/2 x 5 1/2	36x6 36x6d	W	Titan, HD	6	5400	4 1/2 x 6	34x4 40x6d	I
Mac, AC	5	5500	5 x 6	36x6 40x6d	C	Ranger, TK-22	2	2875	3 1/2 x 5 1/2	36x6 36x6	W	Titan, TS	2 1/2	3400	4 1/2 x 5 1/2	34x4 36x4d	I
Mac, AC	6 1/2	5750	5 x 6	36x6 40x6d	C	Rea, F	1 1/2	1385	4 1/2 x 5 1/2	34x4 1/2 34x4 1/2	B	Tower, J	1 1/2	3000	4 1/2 x 5 1/2	35x5 35x7	W
Mac, AC	7 1/2	6000	5 x 6	36x7 40x7d	C	Reliance, 10A	1 1/2	2500	4 x 5 1/2	36x3 1/2 36x5	I	Tower, H	2 1/2	3475	4 1/2 x 5 1/2	36x4 36x7	W
Mac Trac., AB	5	3400	4 x 5	36x4 36x4d	C	Reliance, 20B	2 1/2	3200	4 x 5 1/2	36x3 1/2 36x4d	I	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36x5 36x5d	W
Mac Trac., AC	7	4950	5 x 6	36x5 40x5d	C	Republic, 10E	1	1645	3 1/2 x 5 1/2	35x5 35x5	I	Traffic, C	2	1595	3 1/2 x 5 1/2	34x3 1/2 34x5	I
Mac Trac., AC	10	5500	5 x 6	36x6 40x6d	C	Republic, 11X	1 1/2	2195	3 1/2 x 5 1/2	34x3 1/2 34x5	I	Transport, 20	1	1850	3 1/2 x 5 1/2	34x3 1/2 34x4	I
Mac Trac., AC	13	5750	5 x 6	36x6 40x6d	C	Republic, 19	2 1/2	2795	4 1/2 x 5 1/2	36x4 36x7	I	Transport, 30	1 1/2	2250	3 1/2 x 5 1/2	36x3 1/2 36x5	I
Mac Trac., AC	15	6000	5 x 6	36x7 40x7d	C	Republic, 20	3 1/2	3845	4 1/2 x 5 1/2	36x5 36x10	I	Transport, 50	2 1/2	2785	4 1/2 x 5 1/2	36x4 36x7	I
Master, JW	1 1/2	2690	4 1/2 x 5 1/2	34x3 1/2 34x5	W	Riker, B	3		4 1/2 x 6	36x5 36x5d	W	Transport, 70	3 1/2	4195	4 1/2 x 6	36x5 36x10	I
Master, W	2 1/2	3290	4 1/2 x 5 1/2	34x3 1/2 36x7	W	Riker, BB	4		4 1/2 x 6	36x5 36x6d	W	Traylor, B	1 1/2		3 1/2 x 5 1/2	34x3 1/2 34x5	W
Master, D	2 1/2	3540	4 1/2 x 5 1/2	34x4 36x7	D	Rock Falls, 11	1 1/2		3 1/2 x 5 1/2	35x5 35x5	B	Traylor, C	2		4 x 5 1/2	36x4 36x7	W
Master, A	3 1/2	4190	4 1/2 x 6	36x5 40x5d	D	Rowe, CV	4	3000	3 1/2 x 5 1/2	36x5 36x6	W	Traylor, D	3		4 1/2 x 5 1/2	36x4 36x8	W
Master, E	3 1/2	4610	4 1/2 x 6	36x5 40x5d	D	Rowe, HW	4	4500	4 1/2 x 6	36x5 36x6d	W	Traylor, E	4		4 1/2 x 6	35x5 40x10	W
Master, B	5	5290	4 1/2 x 6 1/2	36x6 40x6d	D	Rowe, C. D. W.	2	3300	4 x 5	34x4 36x3 1/2	W	Triangle, AA	1	1600	3 1/2 x 5 1/2	35x5 35x5	I
Master, F	5	5440	4 1/2 x 6 1/2	36x6 40x6d	D	Rowe, G. S. W.	3	4150	4 x 6	34x5 36x5d	W	Triangle, A	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2 34x6	I
Master Trac., T	6	3440	4 1/2 x 5 1/2	34x4 36x4d	D	Rowe, G. P. W.	3	5250	3 1/2 x 5 1/2	38x7 42x9	W	Triangle, C	2	2700	3 1/2 x 5 1/2	36x4 36x6	I
Maxwell, 1 1/2	1 1/2		3 1/2 x 5 1/2	32x3 32x4	W	Rowe, F. W.	5	5500	4 1/2 x 6	36x6 40x6d	W	Triangle, B	2 1/2	2950	4 x 5 1/2	36x4 36x7	I
Menominee, HT	1 1/2	2040	3 1/2 x 5 1/2	34x3 1/2 36x5	W	Rumley, A	1 1/2	2720	3 1/2 x 5 1/2	36x3 1/2 36x5	W	Twin City, B. W.	2	3000	4 x 5 1/2	36x4 36x7	I
Menominee, H	1 1/2	2125	4 x 5	36x3 1/2 36x5	W	Samson, 15	1 1/2			32x4 32x4	B	Twin City, A. W.	3 1/2	4400	4 1/2 x 6	36x5 40x5d	W
Menominee, D	2	3245	4 x 5	36x4 36x4d	W	Samson, 25	1 1/2			35x5 35x5	B	Twin City, FWDB	3 1/2		5 1/2 x 6	36x6 36x6	I
Menominee, G	3 1/2	4270	4 1/2 x 6	36x5 36x5d	W	Sandow, G	1	2295	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Twin City, FWDA	5		5 1/2 x 6	36x7 36x7	I
Menominee, J3	5	5450	4 1/2 x 6	36x6 40x6d	W	Sandow, CG	1 1/2	2590	3 1/2 x 5 1/2	34x4 34x6	W	Ultimate, A	2	3200	4 x 5 1/2	36x3 1/2 36x5	W
Moline, 10	1 1/2	2250	3 1/2 x 5 1/2	34x5 36x6	W	Sandow, J	2 1/2	3375	4 1/2 x 5 1/2	36x4 36x7	W	Ultimate, AJ	2	3200	4 1/2 x 5 1/2	35x5 38x7	W
Moreland, 20N	1 1/2	2550	3 1/2 x 5 1/2	35x5 36x6	W	Sandow, M	3 1/2	4295	4 1/2 x 5 1/2	36x5 36x5d	W	Ultimate, B & BL	3	3750	4 1/2 x 5 1/2	36x4 36x4d	W
Moreland, 20B	1 1/2	3125	4 1/2 x 5 1/2	36x3 1/2 36x6	W	Sandow, L	5		4 1/2 x 5 1/2	36x6 40x6d	W	Union, F	2 1/2	3150	4 x 6	36x5 36x8	I
Moreland, 20C	2 1/2	3000	4 1/2 x 5 1/2	36x4 36x8	W	Sanford, XV25	2 1/2	3350	4 1/2 x 5 1/2	36x4 36x4d	W	Union, H	4	3975	4 1/2 x 6	36x6 36x10	I
Moreland, 20D	3 1/2	4975	4 1/2 x 6	36x5 40x5d	W	Sanford, XV35	3 1/2	4200	4 1/2 x 5 1/2	36x5 36x5d	W	Union, J	6	5450	5 x 6	36x6 40x14	I
Moreland, 20J	5	5350	4 1/2 x 6	36x6 40x6d	W	Sanford, XV50	5	5100	4 1/2 x 6	36x5 40x6d	W	United, A	1 1/2	2445	3 1/2 x 5 1/2	36x3 1/2 34x5	I
Mutual, 2B	2	3450	4 x 6	36x4 36x8	W	Schacht, 2-Ton	2	3550	4 1/2 x 5 1/2	36x4 36x7	W	United, B	2 1/2	3150	4 1/2 x 5 1/2	36x4 36x7	I
Mutual, 2BP	2 1/2	4150	4 x 6	38x7 42x9	W	Schacht, 2 1/2-Ton	2 1/2	3850	4 1/2 x 5 1/2	36x4 36x4d	W	United, C	3 1/2	3975	4 1/2 x 5 1/2	36x5 36x5d	W
Napoleon, 7	1 1/2	1535	3 1/2 x 5 1/2	35x5 35x5	I	Schacht, 3 1/2-Ton	3 1/2	4350	4 1/2 x 6	36x5 36x5d	W	United, V	5	5100	4 1/2 x 6	36x6 40x6d	I
Napoleon, 7	1 1/2	1800	3 1/2 x 5 1/2	35x5 35x5	I	Schacht, 5-Ton	5	5350	4 1/2 x 6	36x5 40x6d	W	U. S. N	1 1/2		3 1/2 x 5 1/2	36x3 1/2 36x5	I
Nash, 2018	1	1895	3 1/2 x 5 1/2	34x3 34x4	I	Schwartz, A	1	2600	3 1/2 x 5 1/2	33x4 1/2 33x4 1/2	B	U. S. R	3		4 x 5 1/2	36x4 36x4d	W
Nash, 3018	2	2550	3 1/2 x 5 1/2	34x4 34x6	I	Schwartz, BW	1 1/2	3200	4 1/2 x 5 1/2	34x3 1/2 34x7	W	U. S. S	4		4 1/2 x 5 1/2	36x5 36x5d	W
Nelson, F1 1/2	1 1/2		4 1/2 x 5 1/2	36x3 1/2 36x5	W	Schwartz, C.W.S.	2 1/2	4900	4 1/2 x 5 1/2	36x4 36x8	W	U. S. T	5-6		4 1/2 x 6 1/2	36x6 40x6d	W
Nelson, F2	1 1/2		4 1/2 x 5 1/2	36x4 36x7	W	Schwartz, DW	1 1/2		3 1/2 x 5 1/2	36x6 40x12	W	Valle, 46	1 1/2	2200	3 1/2 x 5 1/2	36x3 1/2 36x5	I
Nelson, F3 1/2	3 1/2		4 1/2 x 5 1/2	36x5 36x5d	W	Solden, 2 1/2A	2 1/2		3 1/2 x 5 1/2	36x4 36x7	W	Victor, A	1 1/2	2050	3 1/2 x 5 1/2	34x4 34x5	I
Nelson, FC5	5		4 1/2 x 6	36x6 40x6d	W	Solden, 3 1/2A	3 1/2		4 1/2 x 5 1/2	36x5 36x10	W	Vim, 29	1 1/2	1555	3 1/2 x 5 1/2	31x4 31x4	W
Netco, D	2	3100	4 1/2 x 5 1/2	36x4 36x7	W	Solden, 5A	5		4 1/2 x 6	36x6 40x12	W	Vim, 31	1	2475	3 1/2 x 5 1/2	35x5 35x5	W
Netco, H	2 1/2	3500	4 1/2 x 5 1/2	36x4 36x8	W	Soneca, M20	1 1/2		3 1/2 x 5 1/2	30x3 1/2 30x3 1/2	B	Vim, 22	2	3150	3 1/2 x 5 1/2	36x4 36x6	W
New York, M	1 1/2	3100	4 1/2 x 5 1/2	36x3 1/2 36x5	W	Service, 220	1	2415	3 1/2 x 5 1/2	34x3 1/2 34x5	W	Vim, 23	3	3950	4 1/2 x 5 1/2	36x5 36x5d	W
New York, N	2-2 1/2	3300	4 1/2 x 5 1/2	36x4 36x4d	W	Service, 31	1 1/2	2985	4 x 5 1/2	36x3 1/2 36x6	W	Vulcan, 25	2 1/2	4000	4 1/2 x 6	36x4 36x8	W
Niles, E	2	3000	4 1/2 x 5 1/2	36x4 36x7	W	Service, 51	1 1/2	3415	4 1/2 x 5 1/2	35x5 38x7	W	Vulcan, 25P	3	4800	4 1/2 x 6	36x6 40x8	W
Noble, A21	1		3 1/2 x 5 1/2	34x3 1/2 35x5	W	Service, 51	2 1/2	3475	4 1/2 x 5 1/2	36x4 36x7	W	Walker-Johnson, B	2 1/2	3500	4 1/2 x 5 1/2	36x4 36x8	W
Noble, B30	1 1/2		3 1/2 x 5 1/2	36x3 1/2 36x5	W	Service, 71	3 1/2	4285	4 1/2 x 5 1/2	36x5 36x5d	W	Walter, S	5	5600	4 1/2 x 6 1/2	36x5 40x6d	I
Noble, D50	2 1/2		4 1/2 x 5 1/2	36x4 36x8	W	Service, 76	3 1/2	4485	4 1/2 x 6	36x5 36x5d	W	Walworth, E	1 1/2	2500	3 1/2 x 5 1/2	36x6 38x7	W
Noble, E70	3 1/2		4 1/2 x 6	36x5 36x10	W	Service, 101	5	5275	4 1/2 x 6	36x6 40x6d	W	Ward-LaF., 2B	2 1/2	3590	4 1/2 x 5 1/2	36x4 36x7	W
Northway, B-2	2		4 x 6	36x4 36x4d	W	Shaw, M2	1 1/2		3 1/2 x 5 1/2	32x4 32x4	B	Ward-LaF., 4A	3 1/2	4900	4 1/2 x 6 1/2	36x5 36x5d	W
Northway, B-3																	

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

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No. 11

A Pretty Nifty Couple When You Take Off Your Blue Glasses—What?



Business Is Picking Up—Factories Double Output in February

This Means That Somebody Has Been Selling, Because the Factories Have Been Building Only on Orders—What Does This Mean to You?

THE automotive industry has so far recovered from its recent indisposition that it is able to sit up all the time and it is absorbing nourishment in huge quantities.

All the way up from the parts maker to the retail dealer its pulse is beating more strongly and regularly. Its fever has gone down and with good nursing the doctors will be able to quit calling in a couple of months.

As a matter of fact there never was any danger of death or dissolution. The immediate family realized that while the illness was serious it was nothing more than a breakdown caused by too rapid growth, and indigestion.

The ghouls who were chortling with glee a few months ago because, as they phrased it, "the automobile business is too dead to bury," have taken to wearing black neckties and crape bands on their coat sleeves because they guessed wrong.

Just at this time the automotive industry is about the liveliest corpse ever discovered. Those who wished it ill will have to begin all over again.

Business is coming back.

It isn't walking up to the front door, boldly ringing the bell and demanding entrance, but it is hiding coyly behind a tree and blushing prettily because it wants to be teased to come in. If it is approached with proper deference but with cave man determination it will yield.

This is the well-known psychological moment to tie the can on pessimism and take a shot of optimism. Take it with sugar and water or in homeopathic doses or get one of your friends to give you a hypodermic injection, but get it into your system.

If there is anyone in the industry who hasn't found out for himself that business is getting better every day it



The automotive industry has so far recovered from its recent indisposition that it is able to sit up all the time and absorb huge quantities of nourishment

is because he has been living like a hermit and hasn't talked with his neighbors. It isn't enough better to warrant running around in circles and howling with joy but it's good enough so that the man who isn't getting his share is entirely justified in kicking himself around a couple of blocks.

The individual who gets his share

has got to work for it but work is a virtue and virtue is its own reward.

There isn't going to be as much business for anyone as there was last year but half a loaf is 10,000 times better than starving to death because you lack the energy to scout around and get the half loaf.

There are a lot of automobile dealers who are very distinctly from Missouri when anyone tries to tell them business is running smoothly on the up-grade. They demand evidence and affidavits. They should have no difficulty in finding the evidence if they want it.

THE credit department of the Motor and Accessory Manufacturers Association sticks just as closely to evidence as a court of law. At the last group meetings at Cleveland and New York it was disclosed that the following manufacturers have placed orders for new material in varying quantities:

O. Armleder Co.
Briscoe Motor Corp.
Jas. Cunningham Son & Co.
Dort Motor Car Co.
Elgin Motor Car Co.
Ford Motor Co.
Franklin Mfg. Co., H. H.
Gardner Motor Car Co.
General Motors Corp. (Buick Div.)
General Motors Corp. (Cadillac Div.)
General Motors Corp. (Sheridan Motor Car Co.)
Gramm-Bernstein Motor Truck Co.
H. C. S. Motor Car Co.
Haynes Automobile Co.
Hendee Mfg. Co.
Hupp Motor Car Corp.
International Motor Co., Inc.
Lincoln Motor Co.
Locomobile Co.
Maxwell Motor Co.
Moon Motor Car Co.
Nelson Motor Car Co.
Reo Motor Car Co.
Studebaker Corp.
Stutz Motor Car Co.
Yellow Cab Mfg. Co.

And Here Is Something Else to Remember

Conservative Estimates Place 1921 Production at Half of Last Year

This Would Be Bigger Than 1918 and 1915 and Almost Twice as Big as 1914—What Does This Mean to You?

Releases of shipments on old orders were reported as being received by members from the following:

Acme Motor Truck Co.
 Auburn Auto Co.
 Autocar Co.
 Briscoe Motor Corp.
 J. I. Case Threshing Machine Co.
 Chandler Motor Car Co.
 Chevrolet Motor Co.
 Cleveland Automobile Co.
 Commercial Truck Co. of America
 Day-Elder Motors Corp.
 Diamond T Motor Car Co.
 Dodge Bros., Inc.
 Ford Motor Co.
 Franklin Mfg. Co., H. H.
 General Motors Corp. (Buick Div.)
 General Motors Corp. (Cadillac Div.)
 General Motors Corp. (Oakland Div.)
 General Motors Corp. (Olds Div.)
 Graham Bros.
 Grant Motor Car Corp.
 H. C. S. Motor Car Co.
 Hudson Motor Car Co.
 Hupp Motor Car Corp.
 Liberty Motor Car Co.
 Lincoln Motor Co.
 Locomobile Co.
 Mercer Motors Co.
 Moon Motor Car Co.
 Nash Motors Co.
 National Motor Car & Vehicle Co.
 Northway Motors Corp.
 Packard Motor Car Co.
 Pierce-Arrow Motor Car Co.
 Reo Motor Car Co.
 Standard Steel Car Co.
 Stevens-Duryea, Inc.
 Studebaker Corp.
 Templar Motors Co.
 Walker Vehicle Co.
 Ward Motor Vehicle Co.
 White Co.
 C. H. Wills & Co.
 Yellow Cab Mfg. Co.

Any fair-minded jury that heard this evidence would acquit the automotive industry of having gone to sleep at its post.

Nor is this evidence unsupported. The manufacturers who attended the meeting of the National Automobile Chamber of Commerce in New York last week sup-

ported it. They were unanimous in asserting the outlook was better than it had been in months. *Manufacturers are building cars only upon order, but orders are coming in so fast they are having to increase production steadily.*

The production of passenger cars last month was twice what it was in January and a third what it was in February last year, which was the biggest February the industry ever had. That report proves pretty definitely that the industry is going ahead.



If business is approached with cave man determination it will yield

MARCH will be better than February. There isn't any doubt of that. The industry as a whole is running right now at 30 per cent of normal. If the dealers, the country over, get the orders they can get and should get, it will be on a 40 per cent basis by April. Plants are reopening in all parts of the country and those which have been open are speeding up.

The General Motors Corp. now is controlled by what the irreverent small boy terms "hard boiled eggs." The execu-

tives of that organization have got together and figured it out that the business of that great combination this year will be 56 per cent of what it was last year. They are going ahead on that basis.

Henry Ford isn't given to making predictions but when he does make them they usually come true. He says that if he can get steel at a reasonable price his plant will be running at 75 per cent of normal by the end of this month.

Almost without exception automotive factory executives are radiating sane optimism. They don't expect the biggest year they ever had by long odds, but they know they are going to have a business which would have been considered remarkable before the war. They have set 50 per cent of last year as the mark to shoot at and they expect to hit it.

And if completed vehicle business runs to 50 per cent, replacement business—parts, accessories, and tires—will be at least 70 to 80 per cent of last year's great total.

Dealers in the larger towns throughout the country, except in the South, have been making sales in increasing numbers for the last three months. This business has come as the result of hard work and they expect to keep on working hard.

It is the small town dealers who are telling the saddest tales of woe. They say the farmers and those dependent on them can't and won't buy. Maybe they can't now but the time is not far distant when they can and will.

HERE is a fact for the small town dealer to absorb. When the census of 1920 was taken the cities had reached the peak of their population and prosperity. Even then there were rumblings of the "back to the farm" movement. That movement is well under way.

During the war period the farmers were prosperous but the cities were more prosperous. Now the pendulum has swung and the farms and small communities are coming into their own.

This fact ought to provide food for thought for the small town dealer.

With Completed Vehicle Business Half of Last Year's, Replacement Business—Parts, Accessories and Tires—Will Be 70 or 80 Per Cent of Last Year's

Can You Sell Trucks? Trailers? Transportation?

Here Is How One Philadelphia Concern Is Doing It, All at the Same Time—And Making Good

A SERIOUS little woman climbed nimbly to the deck of a trailer of a truck-and-trailer caravan in Swedesboro, N. J., and for two hours in the driving rain held her umbrella over the head of the speaker of a group of men who had come out to talk transportation to the farmers and townfolk. She had never seen the trailer

orator before, but she personified the vital interest his hearers were taking in his words.

He wasn't saying: "Buy this make of truck and this type of trailer"; he was talking to them *about their farm and hauling problems*. Hence the interest; hence the little woman and her umbrella.

THIS actually happened. It's happening every little while in the selling bailiwick of R. C. Kauffman, sales-manager for the Anthony Kayser Sales Co., Philadelphia, distributor of Transport trucks in eastern Pennsylvania and New Jersey and factory branch of the Highway Trailer Co. for Pennsylvania, New Jersey, Delaware and Maryland.

Some cynic with a nose for news once said: "If you want to interest people, don't tell them anything they don't know; tell them something they already know and they are yours." That's Kauffman's policy when he's selling vehicles. *He knows his audiences are interested in hauling and so he doesn't talk a lot of technical patter over their heads.*

But selling the "Three T's"—trucks, trailers and transportation—so that the propositions dovetail whenever possible, which is quite often, and never clash, isn't just the easiest policy in the world to swing.

Though the truck merchandised comes in sizes from one ton up to three and a half tons, and the trailer output is of all types, this does not always simplify the problem.

This is why:

No salesman in the organization, of course, will overlook a real opportunity to sell truck and trailer together; but it is incumbent upon the salesman to sell *transportation*. That is, on analysis of the prospect's hauling problems, the salesman may have to decide that it is for the best interest of the prospect to buy but one of the two different types of vehicles. In that case *he will try to sell him only that vehicle which the prospect needs in his business* and will discourage his buying the other, even though the prospect should desire it.

How the Prospect Buys

Experience in the field has taught these things in handling trucks and trailers together as a selling proposition:

Open the Door of Publicity



HERE'S a dealer with a prospect list containing 4,000 names, obtained by letters with return post cards enclosed; by the use of up-to-date motor vehicle registers of the States in the territory; by truck-and-trailer caravans into small towns in farming communities when names and addresses are obtained freely from those interested, and by the use of telephone directories.

Close contact maintained between distributor and factory, distributor and dealer, distributor and direct consumer and factory and direct consumer.

1. Most often when truck and trailer are sold together, it is an initial, or a new installation. The man who already owns two or more trucks—especially a good sized fleet—is more inclined to buy trailers than the man who owns but one truck.

2. The farmer, however, is an exception to the foregoing. The farmer with only one truck, is more ready to buy trailers than even the fleet owner; and more hesitant about adding another truck. The farmer has a great deal to do in a day and his carrying capacity is limited. He finds he can save time and get his work done by adding a trailer or so. But the farmer who has no truck is a ready prospect for one as soon as he thinks he can afford it.

3. Naturally, more trucks are sold as initial installations than trucks and trailers together; and the sale of a trailer follows the sale of a truck, more often than the other way around, for very obvious reasons. Yet now and then a farmer will buy a trailer to use when he has no truck; this is especially true of the small type trailer suitable for hitching on behind a Ford, or other light passenger car.

4. There is less sales resistance now, in merchandising trailers, than in previous years, owing to the comparatively recent improvements permitting them to be backed up easily and to track accurately with the truck. Factory and dealer propaganda has removed doubt about the ability of a truck to pull a trailer of equal capacity.

5. Through trailer installations users accustomed to overload get away from hampering restrictions made by States.

6. Officers of State Highway Departments in the territory are advocates of adequate equipment for road contractors—including trailers.

One Force Sells Both Vehicles

The Anthony Kayser Sales Co. does not maintain separate sales forces for its truck and trailer departments. It

has found that a good motor truck salesman of experience can readily grasp trailer merchandising ideas and that it is not necessary to employ trailer specialists. All its truck salesmen must be capable of analyzing hauling problems, since that analytical survey of each customer's hauling proposition is the first step in a sale.

Going After the Prospect

The incident of the little woman with the umbrella illustrates one of the company's methods of obtaining prospects. When the time seems propitious for a "caravan," advertisements are placed in advance in the newspapers of the country towns in the territory through which the caravan is to pass. These advertisements will name the exact point of destination in each place, such, for instance, as "Altmeyer's Hotel," or "in front of the post office," with date of arrival. The papers which will be sure to reach the farmers, as well as the majority of the townsfolk, are selected for this publicity.

Big lithograph posters in colors, of truck and trailer, with date of arrival and point of destination are placed:

(a)—In blacksmith shops, where farmers who have horses will be sure to see them.

(b)—At railroad stations.

(c)—In post offices.

(d)—On billboards around town and at cross roads.

In addition, large canvas signs with bold lettering are fastened to each truck and trailer of the caravan. Of course, by this method truck and trailer help sell each other; but even should sales not be brisk, the advertising is valuable.

The company is much pleased over the results of its circularizing campaigns. In an effort to obtain an active prospect list in which there is no "dead wood" to waste the salesman's time, the sales manager has on hand up-to-date motor vehicle registers of the various States in the sales territory, in addition to the latest telephone books of all important towns and cities therein. Both direct consumer and dealer prospects are listed in this way. And here is where "both ends are played against the middle."

Double-Ended Propaganda

Letters enclosing advertising matter are sent first to direct consumers in the territory. Experience has shown that this stirs up the consumer to either write to or call upon the nearest motor truck and trailer dealers in the territory. If the dealer is not carrying any kind of a trailer, this prodding from the consumer makes him do some serious thinking, as a usual thing.

Orders are thus stimulated both ways and inquiries giving valuable "leads" are promoted. Where there is a dealer representative in the territory, that dealer, of course, gets the benefit of the circularizing done by the company in Philadelphia.

But if there is propaganda between the Philadelphia company and the dealer and direct consumer there is also a

propaganda system between the company, the factory and the consumer. For instance: The Philadelphia company issues letters to both wholesale and retail consumers in various lines of business. Where particularly promising prospects are turned up, a copy of the letter is sent by the company to the factory, which, in turn, reciprocates whenever it locates a good prospect in the company's territory.

In its circularizing campaigns, the

these sources, a record is made of the contents of the card, or its equivalent, together with any additional data that will make possible intelligent sales effort. When a deal is closed, a detailed account is made on suitable records and a copy mailed to the factory sales department. Even though no immediate sales result is brought about, the prospect is not abandoned, nor is selling effort relaxed. A salesman keeps after his prospect until that prospect shows

Philadelphia company mails a letter to the prospect every thirty days, containing pamphlet, post card, or other advertising matter. The factory mails letters in the Philadelphia territory two or three times a month, as conditions indicate. The Philadelphia company has a list of 4000 retail consumers alone.

Blotters are included in the advertising matter enclosed with letters, but care is taken to have pictured on the blotter only that type of truck or trailer suitable to the prospect's business. It is in such attention to detail that success is found.

Special Post Cards for Each Vehicle Type

There is a special post card, self-addressed, enclosed with letters to trailer prospects only and another post card that is sent in letters to prospects for both trucks and trailers. Both of these are shown in an accompanying illustration.

The return post card sent to the truck-and-trailer prospect has a truck column itemized by models on one side, and a trailer column in similar arrangement on the other with a square opposite each type in which to place a check mark indicating special interest on the part of the recipient.

When an inquiry is received from

conclusively a lack of interest in the proposition, or becomes a purchaser. A full force of salesmen for this concern is from ten to a dozen men for the territory.

Following Up

As soon as record has been made of a prospect, a salesman calls for an interview. If he cannot reach his man, the company has a letter written to its nearest dealer representative who is in a position to reach the prospect—that is a representative with whom either a tentative or a permanent arrangement has been made—and there are plenty of the former, for just such purposes. Then this correspondence is filed, marked either "Trailer" or "Truck," according to its nature. A copy of each letter of this kind is sent to the factory for follow-up purposes, for there is a distinct understanding that harmony of effort between factory and distributor spells results. Frequently the factory sales promotion department is called upon to write letters to truck prospects. Such a letter carries a certain amount of prestige.

For similar reasons the Philadelphia company is a firm believer in the efficacy of sending out either the sales manager or some other official to close a large, or a difficult deal. It makes the prospect

Digitize (Continued on page 42)

At the Atlanta Show

People Bought Automobiles

Entire Southeast Reacts to Strong Merchandising Force of Exhibit—Dealers Expect Stronger Demand as Spring Advances—Read How the Southern Dealers SOLD Their Show to the Territory.

By HAROLD F. PODHASKI

ATLANTA, GA., March 10.

THE "Buyers' Strike" may not have been utterly smashed in the South, but it has, at least, been dealt a terrific blow that has sent it to the mat for a good, long count.

Months of individual effort on the part of the automotive dealers in this section to GET BACK TO SELLING undoubtedly accomplished a great deal of good toward the betterment of conditions, but it took the Great Southern Automobile Show only a single week to bring the buying public back to a condition that is more nearly normal than it has been in this part of the country for a good many months.

The big feature of the Atlanta show from every standpoint can be expressed in three simple words—PEOPLE BOUGHT AUTOMOBILES.

FOR weeks before the show there was never any doubt in the minds of many dealers but that such a result could be expected, but the volume of real business actually consummated on the floor at the auditorium exceeded even the hopes of the most optimistic. It provides ample proof that the turning point has at last been reached in the South. From now on automobiles and motor trucks will be sold in this part of the country in greater volume than for many months, and the dealers are unanimous in their belief that the "Buyers' Strike" has virtually become a memory.

The Atlanta show opened its doors at the big Atlanta Auditorium on Saturday afternoon, March 5, the thirty-odd thousand square feet of floor space carried almost a hundred separate exhibits. In the passenger car division there were 41 exhibitors, the main auditorium and Taft hall, an annex, being allotted to this department. In the truck division there were about a dozen displays, while about forty equipment and accessory dealers and manufacturers were allotted space in that division.

While the auditorium was tastefully decorated, an investment of more than \$8,000 being represented in this work alone, it was a noticeable fact that the decorating was not overdone. In other words, it was not so elaborate that the beauty of this arrangement would leave the primary impression on the visitors' minds after they had left the show. Virgil Sheppard, general manager of the

show, followed the same principle in this regard as is followed by experts in the dressing and trimming of window displays. The idea is that the "trimmings" must not be so elaborate that the merchandise on display becomes a secondary consideration. The average visitor at the Atlanta show might comment upon the general beauty and attractiveness of the decorations, but the primary impression left with the visitor was the automobiles, the trucks, the accessories and equipment which comprised the various exhibits. There is a merchandising feat involved in this principle that is of far greater importance than the average person would believe.

The attendance during the opening day of the show exceeded 3000, while

this figure was almost doubled the second day and mounted steadily every day while the show was in progress, March 5 to 12. Attendance figures during the week, in fact, were by far greater than they have been at any automobile show ever held in Atlanta.

Promotion of the event which had been in progress for many weeks before the show accounts for the widespread interest that the whole Southeast displayed. Benjamin F. Ulmer, of the Buick Motor Co., acting as chairman of the advertising committee for the show, accomplished this result with an organization that proved to be highly efficient.

Paid advertisements of ten inch depth and three column width were published in more than 100 newspapers of Georgia,

There Was Grace and Beauty—and a



Real display was secured for the cars at the Atlanta show. The curved

Alabama, Tennessee, South Carolina, North Carolina and Florida. This copy was placed direct through the various dealer organizations throughout the territory, instead of through an agency, which resulted in a big saving to the show committee and at the same time gained for the show hundreds of columns of free publicity that would not otherwise have been possible. These news stories were distributed to the dealers by the various Atlanta distributors, and turned in by them to their local newspapers where, of course, the dealers had a personal acquaintance. This resulted in hundreds of these news stories about the Atlanta show finding their way into print, and thousands of dollars worth of free publicity was thus obtained by the show committee. In this way the attention of the public was attracted to the event throughout the entire Southeast.

In conjunction with the automobile show the Atlanta Merchants' and Manufacturers' Association held a "Merchants' Week" in the city from March 7 to 12. This was in the nature of a spring style festival. From the standpoint of the retailers its purpose was to attract out-of-town buyers to the city; from the standpoint of the manufacturers and jobbers its purpose was to attract out-of-town retail merchants to the city. This event was advertised in newspapers over the Southeast, and the result was that thousands of additional visitors came to Atlanta during show week who would not have come solely to see the show. While they were here, of course, they visited the automobile show.

To insure a wide attendance of dealers from over the territory, numerous of the Atlanta distributors arranged special meetings during the week, urgently requesting their dealers to attend these meetings. This served to bring hundreds of outside dealers to the city during the week, many of whom doubtless would not have come but for the special dealer meetings that had been arranged. It was not merely that the dealers visited the Atlanta show that accomplished the real results in this regard, but that they were thus afforded an opportunity

to see the great interest the general public took in the event, and their own view of the future took a decided turn for the better as a result.

The small town dealers of the South

This Brought Ruralites to the Atlanta Show



More than \$5,000 was invested by the Atlanta dealers in this type of advertising in more than 100 of the leading newspapers of the Southeast, and brought thousands of outside visitors in for the show.

have been as "blue as indigo" for a good many weeks because of adverse conditions under which the industry has endeavored to exist, and when a dealer is in that frame of mind he simply cannot sell automobiles, or anything else for that matter. The interest displayed in

the Atlanta show by the general public, the numerous sales that were actually made on the floor at the auditorium, the general spirit of optimism existent among the Atlanta distributors, brought to a head by the results obtained at the show, did more to restore real confidence as regards the future of the industry among the small town dealers than the oceans of propaganda the distributors have been sending out the past few months with that end in view.

They came to the Atlanta show and they SAW with their own eyes that the long period of depression is on the wane. They have gone back to their home towns with more confidence than has been theirs for months, and that confidence undoubtedly will serve to materially lessen the sales resistance they have been encountering for so many weeks. Much depends on the state of a man's mind when it comes to selling.

Another event that brought several hundred dealers to Atlanta for the show was a special State meeting of the Georgia Automotive Dealers' Association, held Thursday, March 10. The members of this association, which is one of the strongest dealer organizations of its kind in the country, visited the show in a body. And again the small town dealer was afforded an opportunity of seeing with his own eyes that conditions were not nearly as bad as his state of mind had pictured.

Friday and Saturday, March 11 and 12, the Southeastern Automotive Equipment Jobbers' Association held its annual meeting in Atlanta in connection with the show. This brought to the city every automotive equipment jobber in the Southeast of any consequence, as well as numerous factory representatives from the North and East.

The Great Southern Automobile Show brought together the greatest assemblage of automotive products that has ever been seen anywhere in the Southeast. It was undoubtedly the biggest and best automobile show ever held in Atlanta. Here are the facts:

More than \$20,000 was invested for decorations at the auditorium and for entertainment features during the show. The famous Kilties Band gave two concerts daily, afternoon and evening, while a jazz orchestra provided the music for the truck division.

More than \$5,000 was invested in newspaper advertising in more than 100 newspapers throughout the six Southeastern States.

There were nearly 100 exhibits in the various divisions, the largest number ever seen at any Southern automobile show.

Dealers and factory representatives were in attendance during the week from sixteen States.

Trade conditions in Atlanta have often been termed a barometer which truly forecasts conditions throughout the entire South. If that be true, and it doubtless is true, the "Buyers' Strike" has become a thing of the past, and the automotive industry is destined to experience a profitable and prosperous year during 1921.

Big Merchandising Punch at Atlanta



aisles added considerably to the attractiveness of the general show picture

SYSTEM IN BUSINESS

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems—It Will Answer Readers' Questions Concerning System and Accounting

How to Departmentize Accounting

THE business of the automobile dealer is so diversified that it is essential that it be organized into departments if it is to operate smoothly. This principle is applicable to the small garage just as well as to the big dealer in the city. Each department is a unit, and it should be credited with all sales it makes whether to a customer or to another department. And it should be charged with all expenses necessary to its operation.

Departmentization does not necessarily mean a large number of employees. Take a small dealer in a country town. He sells cars, accessories, parts, gasoline and lubricants, service and car storage. His business naturally isn't very large, so he places himself at the head of all of these departments. Suppose he has one salesman. This man can take care of parts and accessory sales at times, and the clerk in office can be depended upon to handle these two departments at other times. He has two mechanics and a helper in his service department, the latter also looking after the garage and gasoline sales. This arrangement is perhaps not ideal, nor practical in all cases, but it will convey the idea that departmentization doesn't mean that each department must have a head and two or three assistants.

Assuming the arrangement suggested above, when the salesman sells some accessories that sale should go to the credit of the accessory department. The salary of this salesman should not be charged entirely to car sales inasmuch

as the accessory and parts departments benefit by his efforts and they should pay for it. This is one of the great advantages of departmentization—it makes it possible to determine where the money comes from and where it goes. For the purposes of accurate accounting it is essential that the business be divided into departments.

What the Accounting System Should Provide

The accounting system should provide some means of making individual sales records for each department. In the Motor World System of Simplified Accounting, it is taken care of on the Cash Receipts and Sales Record form. Fig. 1 shows another form for this purpose. This form is arranged for the departments listed in the second paragraph preceding.

Expenses are handled in a similar manner. In the Motor World system this phrase is taken care of on the Cash Paid and Expense Record. Fig. 2 shows a special form for this purpose. In a similar manner, the purchases of each department should be provided for. By using the facts furnished by these forms, an accurate statement can be made up for each department.

The parts department may be used as an example. Consider a period of one month. The value of the parts sold during the month is determined as follows:

Inventory value at cost prices of all parts on hand on the first of the month

PLUS—Cost of parts purchased during month

LESS—Parts on hand at end of month at cost

EQUALS—Cost of parts sold during month.

The gross sales of the parts department as determined from the form on which the sales are distributed less the cost of the parts equals the gross profits. From this must be subtracted the total of direct and overhead expense, the difference being the net profit or loss.

If no provision were made for departmentization of the income, expense and merchandise accounts, the general profit and loss account would show the net profit of the business, and this figure would equal the sum of the net profits of the various departments as obtained by a departmentized system. But a lump figure of profit or loss would not show where the profits or losses came from. For example the car sales department might be making a large profit, and the service department a fairly heavy loss. A lump figure of profit or loss might show that the business was making money but it would not indicate that the profits of the sales department were going to make up the deficit of the service department.

A departmentized system that shows each part of the business as a separate unit would indicate the unsatisfactory condition in the service department. Knowing just where the leak is, the dealer can investigate and work to reduce or eliminate this loss.

MONTH OF 192		SALES DISTRIBUTION										FOLIO
DATE	EXPLANATION	CASH	ACCT. REC.	NEW CARS	USED CARS	ACCESSORIES	PARTS	GASOLINE	SERVICE	STORAGE	MISC.	
	FIG. 1											

Fig. 1 shows a form for recording departmental sales. Entries are made on this form from the individual sales tickets. Fig. 2 is a form for departmental records of purchases

MONTH OF 192		PURCHASE DISTRIBUTION												FOLIO		
DATE	EXPLANATION	CASH	ACCT. PAY.	NEW CARS		USED CARS		ACCESSORIES		PARTS		GASOLINE		SERVICE	STORAGE	GENERAL
				MDSE.	EXPENSE	MDSE.	EXPENSE	MDSE.	EXPENSE	MDSE.	EXPENSE	MDSE.	EXPENSE			
	FIG. 2															

STATEMENT OF ASSETS & LIABILITIES AS OF NOV. 30, 1920			
ASSETS		LIABILITIES	
(A) Cash in Bank	2710.22	(B) Accounts Payable	2162.70
(F) Petty Cash	106.12	undry Creditors	
(E) Equipment		(C) Notes Payable	400.00
Office	600.00	(I) Accrued Taxes	200.00
Garage	500.00	(M) Capital Stock	5000.00
Gasoline	200.00	(N) Surplus	250.00
Service	1200.00		
(K) Less Reserve for Depreciation	147.80	(J) Profit & Loss	
	2182.50	Earnings to Oct. 31, 1920	2300.00
(H) Accounts Receivable-Sundry	2072.75	" for Nov. 1920	242.12
(G) Notes Receivable	800.00		2542.12
(L) Less Reserve for Bad Debts	2572.75		2792.12
and Allowances	325.20		
	2247.47		
(D) Merchandise			
Gasoline	600.42		
Accessories	1075.40		
New Cars	1452.70		
	3528.52		
	10554.83		10554.83

The trial balance on the right is obtained from the books, and it is used as the basis of the statement on the left. The letters show how the information on the trial balance is used to prepare the statement of assets and liabilities

TRIAL BALANCE AS OF NOV. 30, 1920			
TRIAL BALANCE		C.R.C.	
(A) First National Bank	2710.22		
(F) Cash on Hand	106.12		
(B) Accounts Payable			
First National Bank	1561.88		
Dash Auto Supply Co.	419.42		
Central Electric Co.	40.40		
John Jones	151.00		
(C) Notes Payable	400.00		
(E) Gasoline & Access.	801.42		
(G) Accessories & New Cars	1075.40		
(P) Equipment	1462.70		
Garage	500.00		
Gasoline	200.00		
Service	1200.00		
Office	600.00		
(H) Notes Receivable	800.00		
(I) Accounts Receivable			
Henry Smith	1200.00		
Lloyd Wise	441.72		
Peter O'Brien	431.08		
(J) Accrued Taxes	200.00		
(K) Profit or Loss	2542.12		
(L) Reserves			
(M) Depreciation	147.80		
(N) Allowances	70.00		
(O) Bad Debts	255.20		
(P) Capital Stock	5000.00		
(Q) Surplus	250.00		
	11027.01	11027.01	

How to Prepare a Statement for Your Banker

THE preparation of a statement of assets and liabilities, which is used as a basis for securing loans from the bank, is comparatively simple. The books should be balanced monthly, and a trial balance prepared. This sheet is used as the basis for the preparation of the statement of the condition of the business.

Taking the assets in order, the first two items show all the ready cash. Following this we have equipment, and this represents what is invested in tools, machinery, furniture, etc. But this material is wearing out, and its present value is not what it was at the time it was purchased, so from this total is subtracted the reserve for depreciation. The difference represents what the assets of the company are in the form of equipment. All open accounts are bulked under the title Accounts Receivable, and accounts that are secured by notes are listed separately. However, it will very likely be impossible to collect all of these accounts, and allowances will have to be made on others. Consequently reserves for the debt and allowances are subtracted from the total amount of money owed the dealer, and the difference shows what the collectable assets in this class are. The last item is merchandise. These figures are obtained from the inventory records.

Recording Liabilities

On the other side, the liabilities are listed. The totals of all unpaid accounts and notes are listed under separate headings. The heading Accrued Taxes is a reserve that is established to meet taxes due in the future. Although the Federal income tax is not due until March 15, each month should be charged with its share of the estimated amount that will have to be paid. In this way, provision is made for paying it when it comes due. The same scheme applies to state and local taxes, insurance, in-

terest on loans, etc. The capital stock is considered as a liability because if the business were liquidated, the owners of the stock would expect to be reimbursed for their investment. The surplus account shows the amount that assets exceed liabilities. Profit and loss is made up of the sum of the profits of the business to Nov. 1, plus the profits of the current month. The profit during any month represents the sum of the profits of the various departments. These are in turn figured by deducting from the sales of each department, the cost of the merchandise sold and the operating and overhead expense of that department.

Do You Properly Record Capital and Expense?

FAILURE to differentiate between items of capital and expense frequently causes the books to present an incorrect picture of the business. Of course, all articles for current consumption are properly charged to expense, but the cost of an article which will be used for a period extending over perhaps ten years, should be added to the capital investment.

To illustrate consider some of the tools used in the service station. The life of a file is comparatively short, and its cost is an expense of current operation, but the shop drill press will be in use for many years. Its cost is an addition to the capital investment. As soon as it is used, it becomes second hand, and suffers a considerable depreciation. But if the drill cost \$200 and this amount was charged in the expense of the month that the purchase was made, the monthly statement would not tell the truth. The \$200 spent for this tool will be returned in the form of service for

It may be rather difficult to understand why profits and surplus should be considered as liabilities, and it may make it easier if they are considered as liabilities of the company to the stockholders. Both of these items could be distributed among the stockholders in the form of dividends, but in a small company it is common practice to pay dividends but once a year. Of course all the profits should not be distributed in this manner, as at the end of the year, a portion of the money made should remain in the business in the form of a surplus to take care of unexpected contingencies.

many years, and it is right that the expense account for each month of this service should pay its share.

If we assume that the life of this drill press is ten years, then the proportion of first cost for each year of service is \$20, or a monthly charge of \$1.67. That is the service department should be charged \$1.67 for each month that this drill is in service. This charge should be credited to a depreciation account, which is really a reserve fund that provides for the replacement of equipment as it wears out.

Similarly, money spent in reconditioning used cars is not an expense item, because the expenditure is made in the expectation that it will be returned when the car is sold. By spending this money, the value of the car is increased, and the book value of the car should be increased by the amount that was spent on it. Money spent in this manner is an investment in merchandise just as truly as is a purchase of accessories.

Why Not Let Uncle Sam Help Canvass Your Prospects?



**Lots of People Overlook the Selling Power of Letters—
They Maintain Contact Between Salesmen's Calls and Help
to Create Goodwill—Can YOU Use Any of These Letters?**

The other
day a dealer
asked the
following QUESTIONS:

- 1—*What shall I write after a prospect visits the salesroom?*
- 2—*What shall I write after a salesman calls on a prospect?*
- 3—*What shall I write when a prospect shows interest in service?*
- 4—*What shall I write in acknowledgment of an order?*

**And Motor World gave
the following ANSWERS:**

1.

Undoubtedly you formed certain impressions during your recent visit to the _____ salesrooms.

These impressions we would like to supplement with some facts about the _____ car.

It is driven by something like _____ thousand people who are proud of their ownership of a car which combines comfort, dependability and economy with rare beauty of lines.

We believe you will be interested in knowing that a great many _____ owners have come back to us for their second, third, fourth and fifth _____ cars, a record which testifies more eloquently than would words of ours to the satisfaction they have found in their investments.

Perhaps you would like to drop into the salesroom again to inspect more thoroughly the _____ line. Or would you prefer to have a salesman call at your office or home? We would appreciate word from you as to your wishes.

(It is presumed that the prospect was given a catalog or other information when he visited the salesroom.)

2.

Your interest in the _____ car, as reported by Mr. _____, of our sales staff, prompts us to offer a few suggestions supporting our belief that this car would thoroughly meet your requirements.

The _____, brought to its present state of perfection by improvements in its original design rather than by experimentation with repeated new designs, offers just what the discriminating motorist insists upon, an automobile equally responsive to demands on its powerplant in congested traffic or on the open road—dependable, economical, comfortable and with body lines that justify pride in ownership.

We would like to have you see the full line of _____ cars on display in our salesroom. Will you let us know when it would be convenient for you to call, so that Mr. _____ may be on hand to go over the car with you?

3.

Your expressed interest in the _____ car and in _____ facilities for service in New York prompts us to offer a few suggestions about the readiness of our service station to meet the needs of _____ owners.

The _____ has always been singularly free from mechanical troubles, but no car will run forever without expert attention. This is the kind of attention the _____ service station offers—attention which we are prepared to give promptly and economically whenever any of our owners say the word.

Our service station has been brought to a high state of personal and mechanical efficiency. We should like to have you inspect it and also see the full line of _____ cars on display in our salesroom.

Will you let us know when we may expect the pleasure of a call from you?

(If a booklet or folder with photographs and information about the service station has been printed, it might be enclosed with this letter with an appropriate paragraph referring to it.)

4.

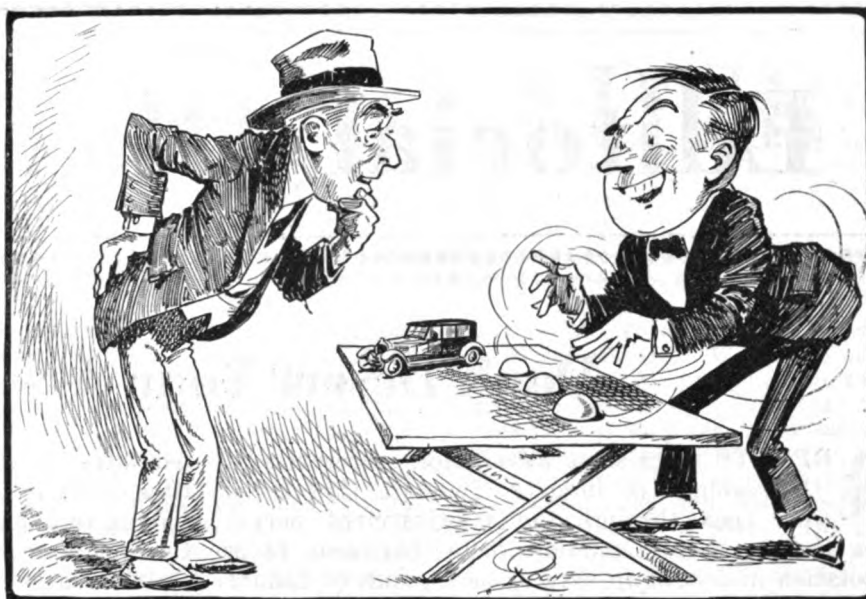
This is to congratulate you on the addition of your name to the rapidly growing roster of _____ owners in New York.

We feel sure you will get a lot of satisfaction out of your _____ and we want you to feel free to call on us for suggestions or assistance, if you feel the need of them while you are getting accustomed to the car and its operation.

Won't you drive into the service station some day, just to say "Hello"? We want to know you better and we want you to know us.

Does the Salesman Ever Have to Lie?

By RAY W. SHERMAN



"**S**AY Boss!" demanded young Georgie Roper, late tyro on the sales staff of C. J. Reilly, Inc., which scattered Sennetts in and about Callawassa. "What are you going to say to a prospect who wants to know if it isn't true that the whole darned town is overstocked with cars and that if he shops around a little he can get a fine cut price from somebody or other? What're you going to say to a bird like that?"

Both Reilly and Tommy Trumbull, the manager of affairs, laughed. Georgie often ran up against snags, and when he burst into the office with one it generally was about 110 proof and of the kind seldom found.

"Sure! Laugh!" blurted Georgie. "It's all right for you fellows to sit here in the office and laugh, but what about me? I've got to go out and wrestle with these birds, and it isn't any laughing matter with me. Some time I'm going to write a book or print a magazine for prospects, giving all the reasons for not buying an automobile. Believe me! I've got some good material!"

"Why not tell the man the truth?" asked Tommy.

"The truth!" Georgie shouted. "Tell him the town's full of cars and that he ought to go out and shop!"

"Well, you can't disagree with him, can you?" asked Reilly.

"I can't? I did!"

"You lied to him?" smiled Tommy.

"Yes—and no—"

"Well," said Reilly, in a smooth, fatherly way, "it is hard once in a while to know whether to lie or tell the truth, but, after years of experience, I've come to the conclusion that I'm a poor liar—and so I generally tell the truth. Lying never did me any good—and telling the truth never did me much harm."

"Gosh!" perspired Georgie. "I wish I could do that!"

Reilly leaned back and laughed. He could peer into the distant past and see himself oozing the same beads of moisture in tight places. He continued:

"By telling the truth I don't mean that a man must needs lay his whole life bare before the world, but I do believe

a salesman can stick so close to the truth that he at least isn't lying. I remember once I went into a store and was having some conversation with a clerk, a friend of mine, and in the course of the transaction he said, 'Well, you've got to lie some of the time.'

"I can't quite see that attitude. If a man runs a fair and square business why should he have to lie? If he is honest what has he to cover up? When that man asked you about his chances of finding a cut-price car, I think I would have told him the truth—and the truth is this:

"There are some cars in stock in Callawassa—but not nearly as many as folks think. As for ourselves, you know, as do the rest of the salesmen, that we have fifty cars. The factory hasn't made a car since the first of the year, and it's a case of everything going out and nothing coming in. Also, we have thirty dealers around the territory, not one of whom has an unsold car in stock. If each dealer rushes in here and demands a car, as he will inside of a month, that will leave twenty cars for retail sale in Callawassa.

"Unless the factory gets some stuff coming through soon, this twenty cars will disappear like a snowball in the sun, and then there will be some prospects cussing us because we tried to sell them cars and now won't let them have them.

"If price is the only thing this prospect wants, tell him he can do a lot better than buy a Sennett, but if he is looking for a car that will represent a low upkeep cost per year and several years of service, he would do well to think twice and figure a bit before he decides that something else is cheaper than a Sennett. Also, tell him we have a number of reconditioned cars of a variety of makes, many of which really are more comfortable to drive than a new car, and that if he wants something at a low price, he can't do better than look in at our used car department. Tell him that seeking best value for the money is a wise move these days, and

that the first move in this shopping expedition should be to stop at our place. If you do that, you've agreed with him, have told him the truth and still have invited him to look us over. It also leaves the way open for further negotiations and he can't pull a Lloyd George on you.

"I can't conceive of many occasions when business men can't afford to tell the truth to the public. If you say a man's car will be ready at a certain time and you can't make the grade, telephone him and explain. Don't let him call at the appointed time and then lie to him. Also, have a man in charge of your shop who can plan efficiently, who can tell within a few hours of when any job can be rolled out and run your place right—then you won't have to be making excuses—and lying.

"If a prospect asks you if it isn't true that the Sennett is too small and short on leg room, you don't have to say that many people think so. Your answer should be that some cars are larger than others, that there are two thousand people in Callawassa who are finding no fault with the Sennett and that the real answer to that question should be made by the prospect himself through a demonstration.

"If you play straight, honest sales work you don't lie. You simply pass the buck on a lot of things to the prospect. Anyway, it isn't your opinion of the car that's going to satisfy him. It's HIS opinion, and the salesman's job is to wave the product in the face of the prospect in such a way that a favorable opinion will be created. Once this opinion has become strong enough to cause a sale, it is up to US to keep it favorable through our service. Oftentimes you may have to give an evasive answer as you spar with the prospect, but—"

"Sure," said Georgie, "give him an evasive answer. Good idea! If he asks you if the car is any good ask him the population of the Island of Yap, and then start talking about what fine office furniture we have."

Editorial Observation

Don't Desert Your Association

R EPORTS from some association secretaries in the automotive industry indicate that there has been through the readjustment period more than a normal amount of withdrawals from association membership, largely as a result of failure to pay renewal dues. This situation is unfortunate and one which ought to be taken in hand by the trade and speedily remedied. It is doubtful if there was ever a time when association was more urgently needed than now, with both the Federal and State governments considering additional tax burdens on the industry and with municipal authorities in many parts of the country looking about for ways and means of adding to their revenues by assessing the automobile, which seems automatically to jump into every public man's mind when he thinks of means of raising money.

Associations, national, State and local, have done important work for the industry in the past few years and they should be strengthened rather than weakened as the industry grows. Any dealer who withholds from an association with which he has been affiliated a few dollars in dues because, perhaps, he

hesitates to part with that much ready money in a time of strife, is simply putting himself in the way of having to pay in some fashion or other perhaps many times that amount. Because an association which he fails to support may have to curtail its activities, it may be that the dealer will wake up some fine morning to find some sort of local tax placed on his privilege of doing business, a tax which would amount to many times per year the amount of his dues. Or he may find as a result of his failure to support a local or national association and the consequent curtailment of its activities that some additional national or State burden has been placed upon the automobile, truck or tractor, thus increasing sales resistance, perhaps depriving him of profits on sales amounting to many times the amount of the dues which he withdrew.

Not merely for protective but for constructive purposes, trade associations are highly essential in the automotive business. They should be supported and encouraged even at the expense of sacrifice of some less important auxiliary of a dealer's business.

Don't desert your association.

Cutting Down the Wrong Department

A BUSINESS writer in one of the magazines recently told how the folly of cutting down a trained organization was learned by a big electrical corporation back in the readjustment period of 1907. This corporation, the writer went on to say, had one of the finest research staffs in the world. It made the error of reducing this staff, as a non-productive department, and when general conditions righted themselves it took ten years to get the organization back on its old basis of efficiency. When unsettled conditions made their appearance again in 1919 this company, instead of curtailing, doubled its appropriation for scientific investigation during that year.

The experience of the electrical company as regards its research department may be applied to the sales end of the automotive business. Automobile, truck and tractor merchants have reduced expenses and some of them must reduce even further during the current year, but in most cases, it may be said that curtailment should be made elsewhere than in

sales and sales promotion work. Advertising and selling must be conducted on an efficient basis, but their powers should be extended rather than curtailed during periods when sales resistance is strong.

Good-bye, Gus!

O UT in Kansas City the other day a pleasant time was had by all at the last joyous rites over the body of Gus Gloom.

And, to-day, from all corners of the land come the glad tidings that he of the doleful business countenance has faded out of the spring merchandising picture under the bright, energizing, "Depression be Damned," influence of the Gogetter & Co. type of automotive dealer.

The truth is, we're "getting back to selling." And Gus Gloom, in a selling atmosphere, is a fish out of water.

Good-bye, Gus, we're glad you're gone!

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Concerning Burning Questions

Another letter from an old friend of Motor World who has some definite thoughts, and expresses them.

Editor Motor World: I have been quite interested in the letters and articles in recent numbers of Motor World regarding "The Tire Situation," "The Dealer Contract" and "Concerning the Jobber."

It has been nearly two years since I took an active part in Motor World's timely discussions, so I presume many of the older readers wonder what has become of me. Well, here I am again, but up in New York State this time. However, I am still reading Motor World.

I wish to state that my observations have covered a long period of years. During the past two years as proprietor of a garage on the "Million Dollar Highway" here in New York State, I have had a wonderful chance to listen in on conversations of salesmen, tourists from far States, and business men in various lines of automotive business. Their conversations have been, to say the least, very enlightening.

Concerning the Jobber

I find that many, far too many, manufacturers are so anxious to place their goods before the public that they overdo the matter. Their salesmen, and they are legion, breeze into town and light upon the first garage, service station or salesroom, and try to persuade the proprietor to order a big stock of their goods and become a jobber for that territory. They warble about long discounts, jobber's rates, sixty to ninety days' time on goods, etc. They paint a wonderful picture of expanded business, and nice, fat, tame profits; a picture that would warm the heart of a Rosenblum.

Perhaps the proprietor falls for the beautiful word sketch which the salesman has yodeled off to him, and places a large order for the goods, thereby becoming a jobber. The goods come, are placed upon display, and then —? The dealer discovers that the salesman has created quite a flock of jobbers in that particular territory. The dealer-jobber, therefore, becomes mildly peeved and does one of two things, either sends the goods back, at a loss for handling and transportation charges, or he cuts the price in hopes of unloading before the rest of the jobbers beat him to it. Of course, some of the dealers are bound to be stuck with a lot of the goods. Are

they singing anthems to the man and salesman who lifted them into the jobber class? They are NOT. What kind of a name and reputation does the manufacturer get in this territory, the kind he wants? He does NOT.

But if he had placed his goods with a reputable JOBBER, we would have an entirely different story. Then, the jobber's salesmen would sell his customers a small quantity of goods, just what he thought the customer could handle. If for any reason the dealer could not move the goods, then the jobber's salesman would take them off his hands and allow him credit for them. The dealer would be perfectly satisfied and have no kick against the manufacturer. The jobber's salesman would place the goods in some other community where they would sell, and all would be as merry as the proverbial "Wedding Bell."

The Tire Situation

Do the tire manufacturers think it is good business to have their goods on display in grocery stores, drug stores, hardware stores, blacksmith shops, real estate offices, on farms, etc? If it is good business, what is wrong with the shoe and clothing manufacturers? I never saw a pair of Ralston-Health, Walk-Over or Douglas shoes for sale in any of the above places. Nor I never saw a Hart, Schafner & Marx, or any other well-known brand of clothes on display in any of the above mentioned places either. How come? Why not? If the shoe and clothing manufacturers are wise, then the tire manufacturers must be otherwise. Who will tell me "Which Is What?"

Owners drive into our garage with new shoes which they purchased in Buffalo. They proudly flaunt their bill of sale in our face while they loud-pedal "How's that? Can you people sell me tires as cheap as that?" We meekly answer, "Nay, brother, nay, that is just what we have to pay for them ourselves." Can you blame the owners for taking advantage of such chances? HARDLY. Can you blame us for not tying up several thousand dollars in tires? HARDLY.

The Dealer Contract

The term dealer contract reminds me of the rustic who viewed a camel for the first time. After which he exclaimed, "Hell, there aint no sech animul." Instead of hand-picking a few good responsible dealers and then co-operating with them, the manufacturer and distributor grab off the first curb-stoner who will purchase a demonstrator and

sign a —? Then they howl because they do not sell cars. We sell no cars, but we do repair all makes and we have a good chance to learn just what the owners think of their cars, their dealers, distributors and the factory.

They will remark, "The car is not so bad, but the dealer here has no service station and carries no parts. The distributor in Buffalo only carries a few parts and when you send to the factory for anything, hell could be frozen over before you get it." We are bombarded with literature from the factories; distributors are camping on our trail trying to persuade us to take on their cars. Some of them have a dealer here now, but they say that they are not satisfied with him. Interview the dealer and he is not satisfied with either the distributor or the factory. The present contract is all one-sided. The manufacturer hedges himself on all sides by clauses relative to deliveries being contingent upon this, that and the other. He refuses all responsibility for failure to deliver cars as per contract. If all goes well at the factory, and they get out a large quantity of cars, then the dealer has to take cars and dig up the mazuma for them even if it is in the dead of winter and the snow steen feet deep.

The average dealer cannot raise ten thousand dollars every two or three weeks during the winter in order to have cars to sell in the spring and summer.

The manufacturer who builds a good car, builds it carefully, sends it out in good shape and co-operates with his distributors and dealers, has a bright future before him. The rest will either have to wake up or fall by the wayside, there is no other way out.—C. R. Pierson, Central Garage, Million Dollar Highway, Medina, N. Y.

The Dealer Contract

This writer predicted the perpetual contract years ago.

Editor, Motor World:—I am heartily in sympathy with Motor World's forward action on the proper contract relation between the manufacturer and the dealers. Several years ago I predicted that the perpetual contract would come into vogue, so that the time would come when the regular automotive merchants would be backed up by their factories—that trucks and cars would be sold to a responsible dealer on 30, 60 and 90 days open sale accounts, just the same as are wagons and farm implements, and why should not such be the case?—Southerner.

A Department of BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 183

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Time Estimates and Classified Operations on the Overland Four

THE factory service department of Willys-Overland, Inc., has conducted a number of tests on timing the standard operations, and the following listing is given as a fair average. The time for performing the operations will naturally be largely dependent on the shop equipment and the skill of those in charge of the work. For a very large and completely equipped shop most of the operations can be scaled down considerably, while in the case of small shops with inadequate equipment and few special tools, the time will no doubt be increased. Unless there is some good reason, any able mechanic should be able to finish the jobs in the time stated with ease.

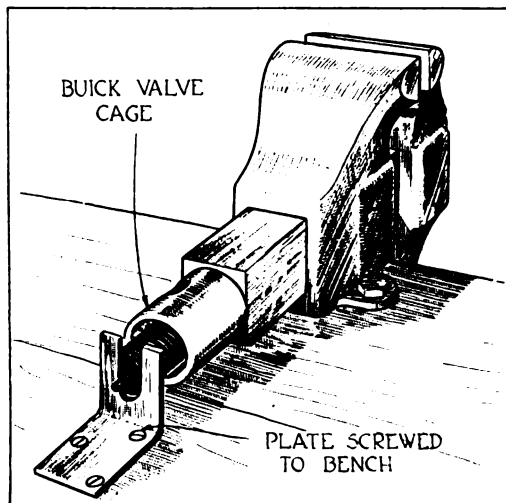
Operation	Hours and Minutes	Operation	Hours and Minutes
Engine Operations		Gearset Operations	
Remove and replace crankshaft and camshaft timing gears	1:15	Remove and replace clutch and brake pedal..	:30
Remove and replace generator	:30	Remove and replace gearset shaft annular bearing....	2:30
Remove and replace carburetor	:20	Remove and replace gearset sliding gears or main shaft	1:30
Remove and replace starting motor or Bendix drive-pinion and spring		Remove and replace countershaft	3:15
starting motor	:45	Remove and replace countershaft gear.....	3:00
pinion or spring	1:00	Remove and replace countershaft bushings.....	3:15
Remove and replace valve spring		Remove and replace idler gear shaft.....	3:15
one valve	1:30	Remove and replace idler gear.....	3:15
complete set of valves and valve springs.....	3:30	Remove and replace idler gear bushings.....	3:20
Retime ignition	:30	Remove and replace gearset unit.....	2:00
Adjust push rods.....	:30	Remove and replace gear shift housing.....	:15
Clean out carbon and grind valves.....	2:30	Remove and replace gear shifter fork	:30
Remove and replace cylinder head and gasket.....	:30	Remove and replace gear shift lever.....	:15
Remove and replace rear cam bearing or fly wheel....	3:30	Remove and replace gearset and universal joint assembly	2:00
if cam bearing is installed.....	3:45		
Remove and replace crankshaft.....	18:00	Front Axle Assembly Operations	
Take up crankshaft main bearings.....	3:00	Remove and replace front wheel bearings	
Take up connecting rod bearings.....	3:00	1 wheel	:15
Remove and replace distributor	:15	2 wheels	:30
Remove and replace cylinder block.....	20:00	Remove and replace or straighten front axle	
Remove and replace power unit.....	3:00	replace	2:30
Replace engine assembly.....	3:30	straighten	3:30
Remove and replace push rod or camshaft.....	2:20	Remove and replace front axle steering knuckle or	
Remove and replace starting motor switch.....	:20	knuckle bushing	
		1 knuckle	1:30
Clutch Operations		2 knuckles	3:00
Remove and replace clutch assembly, clutch spring or		1 set knuckle bushings.....	2:00
clutch shaft annular bearings	3:00	2 sets knuckle bushings.....	4:30
with installation of spring.....	3:15	Remove and replace or straighten steering knuckle tie	
Remove and replace clutch operating fork.....	2:15	rod	:15
Adjust clutch	:15	Remove and replace steering knuckle arm.....	:05
Replace clutch shaft or gearset front annular bear-		Remove and replace steering knuckle pivot bolt.....	:20
ing	3:30	Remove and replace steering arm.....	:15
		Remove and replace steering gear.....	:45

Operation	Hours and Minutes	Operation	Hours and Minutes
Remove and replace steering arm shaft, steering arm shaft pinion, steering arm shaft pinion pins, steering gear internal gear and steering pinion shaft		Reline outer brake band	1:00
replacing steering gear units.....	1:30	Reline inner brake band	:30
replacing bushings	2:00	Remove and replace differential assembly.....	1:15
Remove and replace front spring or spring leaves		Remove and replace rear axle grease retaining washer.	:20
1 spring	:45	Remove and replace rear wheel bearing.....	:25
2 springs	1:00		
Remove and replace radius leaves	:10		
Remove and replace front spring yokes.....	1:00		
Align front wheels.....	:15		
Rear Axle Assembly Operations		Miscellaneous Operations	
Remove and replace rear spring.....	:50	Remove and replace gasoline tank.....	:50
Remove and replace rear spring shackle.....	:30	Remove and replace instrument board.....	3:00
Remove and replace propeller shaft tube, propeller shaft, propeller shaft front and rear bearings and bevel driving pinion		Remove and replace wiring harness.....	1:30
replace tube	1:30	Remove and replace ignition switch	:20
replace shaft	1:45	Remove and replace current indicator.....	:15
replace bearings	1:45	Remove and replace instrument board lamp.....	:08
replace pinion	1:30	Remove and replace speedometer head.....	:15
Adjust outer brake.....	:15	Remove and replace radiator	:45
Remove and replace outer brake operating tube or inner operating cam brake shaft.....	1:30	Remove and replace radiator shell.....	:18
		Remove and replace running board frame splasher.....	1:00
		Remove and replace body (2 men).....	2:30
		Remove and replace windshield	:15
		Remove and replace windshield glass.....	:15
		Remove and replace upholstery	:10
		Remove and replace rear fender	:30
		Remove and replace front fender.....	:45
		Remove and replace running board.....	:30

A Woman Contributed This Repairshop Shortcut



The fair mechanic and her contribution to help save time in the repairshop



thru. 2—Bend strip to form a right angle, and fasten the screw end to bench directly back of vise (far enough back so as not to interfere with working of same. 3—Place valve head against movable end of vise with stem end thru the slot in the steel. 4—Then close jaws of vise, which at the same time will compress valve spring and force stem with pin thru the slot in the steel strip. 5—Pin is then easily removed or replaced.—Mrs. C. J. Clark.

CHAIN COMPANY WINS SUIT ON WEED PATENT

WILMINGTON, DEL., March 12—In the suits of the American Chain Co. against the United Auto Stores, Inc., Judge Morris in the U. S. District Court here entered the final decree Feb. 25, holding Weed patent No. 768495 of the reversible chain grip to be valid and infringed by the grips made by George J. Campbell and sold by the United Auto Stores.

It was also held that the infringing grips were finished in a style or dress that so closely imitated the Weed grips made by the American Chain Co. as to constitute unfair competition in that the defendant's grips were finished with grey side chains and cross chains having a light coating of copper.

It was held that this style of finish or dress of chain grips was distinctive of the Weed grips and should not be used by other concerns. Permanent injunction was granted against infringement of the Weed patent and against the manufacture or sale of grips having grey side chains and either copper or brass plated cross chains.

IT is so seldom that the fairer sex interests itself in the mechanical intricacies of the automobile that the woman mechanic is a novelty. True, during the war we had a number of women who showed that they were fully able to make the carbureter carburetor and make the muffler muffle, but with the increase in the supply of male labor, many of these women have gone back to other pursuits.

The Auto Repair Shop in Oberlin, Ohio, is a sort of family affair and the shop is run by C. J. Clark and Mrs. C. J. Clark who is considerable of a mechanic. Here is what she says—

Editor Motor World: For the past four and a half years I have been working with my husband repairing

automobiles in a small repair shop which we own. I am enclosing a description and a sketch of a device that I find very useful for removing and replacing the valve pins on Buick cars. We have been taking Motor World but a short time and have seen many good ideas in the Repairshop Shortcut Department — Mrs. C. J. Clark.

And here is the shortcut—

A handy device for removing and replacing pins in Buick valves is made by taking a strip of flat steel, 1½ in. wide, about 8 in. long, and ¼ in. thick. 1—In one end drill three countersunk holes, for flat-head wood screws. In the other end cut a slot about 1½ in. deep and wide enough to allow stem of valve and pin to pass

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Utility Features New Dealer Building

*Efficient Operation Obtained
by Building to Fit the
Business*

MODERN construction is typified in the new home of the Lone Star Motor Co., dealer in El Paso, Texas. The building is four stories and basement, and is of brick and re-enforced concrete construction throughout. It is located on a corner lot 120 x 120 ft., and the two rear sides face on alleys so the building has natural light on all sides. The exterior of the building is finished in dark brick with deep drab mortar, and joined with white trimmings. Steel sash windows are used throughout.

The showroom, which extends all the way across the front of the building, is 75 ft. deep. This large area is necessary because of the fact that this dealer sells four different makes of cars, two trucks and a tractor. The administrative and sales offices are located at the rear of the salesroom. Private offices are provided for the president, general manager, sales manager and credit manager. Glass partitions are used to divide the office space.

The rear portion of the building is used as an entrance to the service de-



This new building is a permanent and valuable advertisement for the Lone Star Motor Co.

partment on the upper floors, and the accessory department is also located here. The showcases and shelves are ranged along the left side as viewed from the service entrance to the building. Gasoline and oils are sold here, and air and

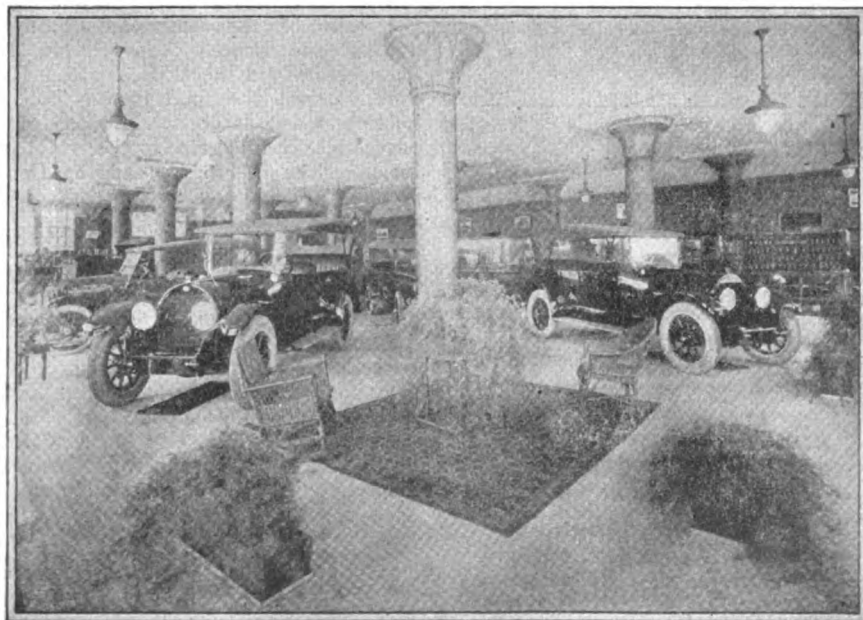
water service are rendered at the curb. The service manager's office is also located in this portion of the building.

The basement extends under the entire building. It is used mainly for the storage of surplus cars stocks. The accessory stockroom is also located here, and, of course, the heating plant.

The space on the second floor is divided between the used car salesroom, and the top and upholstery department. The latter is about 40 x 120 ft. The corner position is given to this department, and its longer dimension is at right angles to the longer dimension of the new car salesroom on the first floor. No special decorative scheme is attempted in the used car showroom.

The parts department is on the third floor, and occupies the space directly above the top and upholstery department on the second floor. Bins and racks are installed to assist in the efficient handling of replacement parts. The stock is valued at \$85,000. This department is separated from the paintshop, which takes up the balance of this story, by a counter and a wire screen which extends to the ceiling.

In one corner of the paintshop, an unusually fine varnish room is located. This room is equipped with a warm-air system that can be regulated so that the temperature can be maintained at the



This attractive salesroom is boosting sales

proper point under all weather conditions. This insures proper drying of the varnish. The battery charging and rebuilding shop is also located on the third floor.

The general shop is located on the fourth floor, and it is well departmentized. Special rooms are provided for radiator and welding repairs, the machine shop and electrical repairs. All of these departments are equipped with such modern tools and appliances as are necessary to service the products handled by this dealer, in an economical manner. An office is provided for the shop superintendent, and adjoining it, there is a toolroom.

The floor-to-floor transportation of cars is handled by an electric elevator, 10 ft. wide and 30 ft. long. There is also an electric passenger elevator. The car elevator is so placed that a car can drive directly into either the used car showroom or upholstery department on the second floor. Wash and locker rooms

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

are installed on each of the upper three floors. Each floor has a washrack, and compressed air is piped throughout the building.

Everywhere in this building, there is evidence of careful forethought. The building fits the business. This is the

right way to do it. Just putting up a building, and then making the business fit it, is poor policy, as operating efficiency is difficult to obtain in this way. The first step is to analyze the requirements of the business, and with the results of such an analysis as a basis, it is possible to draw plans for a building that will be as fine as this.

The Gas Tank

THE initial issue of the house organ published by employees of the Motor Company, Universal Auto Company, Automotive Company and branches, of Winston-Salem, S. C., distributor of Hudson, Essex and Buick cars, and many other automotive products, appeared at the annual banquet of the company here recently. The function was attended by employees of the company and members of their families. It was held in Hotel Zinzendorf.

Inside the New Building of the Lone Star Motor Co.



1—This is the view that greets the driver coming in through the service entrance. 2—Used cars are really displayed in this salesroom. 3—\$85,000 worth of parts are stored here. 4—The lighting in the machine shop is typical of the whole building. 5—Equipment like this reduces service charges for labor.

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD's legal editor to discuss the question?

How to Sell Under New York Lien Law

Editor Motor World: We have had a car stored in our garage nearly a year and although we have written to the owner a number of times he pays no attention to our letters and neither pays our bill nor makes any effort to take his car away.

Just what must we do to get our money. How can we sell the car under our lien? J. L. P., Binghamton, N. Y.

Answer—The New York Lien Law at the present time provides that garage-keepers have a lien on automobiles for storage, repairs, gasoline and other supplies furnished with the consent of the owner, whether a conditional vendee or a mortgagor in possession, and may detain the car in their possession until paid for.

They may also give notice and sell the property under their lien. In order to sell the property it is necessary that notice be served on the owner in the county where the lien arose or be mailed to him at his last known residence or post office address. The same notice should be given to persons who have given notice of an interest in the property, if there are any such persons.

The notice must specify the nature of the debt, the charges claimed to be due, must contain an itemized statement of the charges, and the time when they became due, contain a brief description of the personal property against which the lien is claimed to exist, give the estimated value of the property, and the amount of the lien at the date of the notice.

It must also require the owner to pay the amount of the lien on a day not less than 10 days from the time the notice is served and must state when and where the property will be sold if the amount due is not paid.

The lienor is entitled to be paid for caring for the property between the time the notice is given and the property is sold, if the notice contains a statement that that amount is likewise demanded.

A notice of sale must, likewise, be published once a week for two consecutive weeks in a newspaper published once in the town or city where such sale is to be held and the sale shall not be held less than 15 days from the first publication.

If there is no newspaper published in the town or city where the sale is to be held the notice shall be posted in six of

the most public places at least ten days before the sale. I would not advise you to attempt to sell property under your right of lien without the services of an attorney as it is a difficult matter to closely follow the successive steps provided for in the statute unless you are familiar with legal procedure.

The New Jersey Lien Law

Editor Motor World: Will you kindly print the New Jersey garageman's lien law in full? R. L. B., Singac, N. J.

Answer—Glad to, Here it is!

Chapter 312

An Act for the Better Protection of Garage Keepers and Automobile Repairmen.

Be it enacted by the Senate and General Assembly of the State of New Jersey:

1. All persons or corporations engaged in the business of keeping a garage or place for the storage, maintenance, keeping or repair of motor vehicles and in connection therewith stores, maintains, keeps or repairs any motor vehicle or furnishes gasoline, accessories or other supplies therefor at the request or with the consent of the owner or his representative, whether such owner be a conditional vendee or a mortgagor remaining in possession or otherwise, has a lien upon such motor vehicle or any part thereof for the sum due for such storing, maintaining, keeping or repairing of such motor vehicle or for furnishing gasoline, accessories or other supplies therefor, and may without process of law detain such motor vehicle at any time it is lawfully in his possession until such sum is paid.

2. Any person or corporation acquiring a lien under the provision of section one of this act shall not lose such lien by reason of allowing the motor vehicle or part or parts of the motor vehicle to be removed from the control of the person or corporation having such a lien, and in case a motor vehicle or part or parts are so removed the person or corporation having the said lien may, without further process of law, seize the motor vehicle or part or parts thereof wherever the same is or are found within the State of New Jersey.

3. All such property so held by any such garage keeper or automobile repairman shall, after the expiration of thirty days from the date of such detention, be sold at public auction, upon notice of said sale being first published for the space of two weeks in some news-

paper circulating in the city, borough, town, township or other municipality, in which said garage keeper or automobile repair shop is situated, also after five days' notice of said sale set up in five of the most public places in said city or township, and the proceeds of said sale shall be applied to the payment of such lien and the expenses of such sale; and the balance, if any remaining, shall be paid to the owner of such property or his representatives; and if the said balance is not claimed by said owner within sixty days after said sale, then the balance to be paid over to the overseer of the poor of the said city or township for the support of the poor.

4. This act shall take effect immediately.

Approved April 14, 1915.

Owner Responsible

The Supreme Court of Florida recently decided that in Florida the responsibility of an automobile owner extends to its use by one with his knowledge and consent.

Judgment was recovered by an injured party in the sum of \$7500 for injuries sustained through the negligent driving of an automobile by a servant even though the latter was engaged on his own business at the time of the accident.

The court said, "Much confusion has resulted from the use by the courts and text-writers of a term so inadequate and unfit as 'dangerous per se,' in discussing the liability of the owner of an instrumentality that is peculiarly dangerous in its operation; who permits another to run it on the public streets and highways."

"Wild animals and dangerous explosives are dangerous per se; that is they may inflict injury without the immediate application of human aid or instrumentality. Neither a locomotive—a trolley car or an automobile is dangerous per se—by or through itself—in that it can neither inflict injury to a person except by its use or operation. A locomotive in the round house, a trolley car in the barn an automobile in the garage, are almost as harmless as canary birds, but in operation they are dangerous instrumentalities, and the master who trusts them to another to operate—the one, on its right of way—the others on the public highway, cannot exonerate himself from liability for injury caused to others by the negligence of those to whom they are intrusted."

Repairshop Shortcuts

No. 2866—Giant Pneumatic Tire Spreader—A quick and positive means for opening or spreading a giant pneumatic is shown in the sketch, being made of a machine bolt $\frac{3}{4}$ x 10 in., a washer, a pin and two spreader hooks made of pieces of spring leaf. One of these is drilled so that the bolt will turn and the other is threaded. Operated with speeder wrench.—Mertens Vulcanizing & Tire Agency, Belleville, Ill.

No. 2867—Gasket Scraper—A gasket scraper for crankcases, manifolds and other parts is made by grinding the teeth from a triangular file and hollow grinding the sides.—Edward Ruesch, Buffalo, N. Y.

No. 2868—Revolving Stand—The revolving work stand is made from junk parts as indicated in the sketch.—S. E. Gibbs, Colfax, Iowa.

No. 2869—Adjusting Wrench for Ball Joints—The wrench is made by softening one part of a spring leaf and bending at right angles, grinding as shown. When the straight end is used, a wrench is used to turn it, but when the other end is used, this is unnecessary.—Edward Ruesch, Buffalo, N. Y.

No. 2870—Gasoline Nozzle Drain Pipe—By hanging gas pump nozzles in drain pipes leading under ground, there will be no accumulation or drippings to rot hose and spatter cars.—Donald McClean, Cleveland.

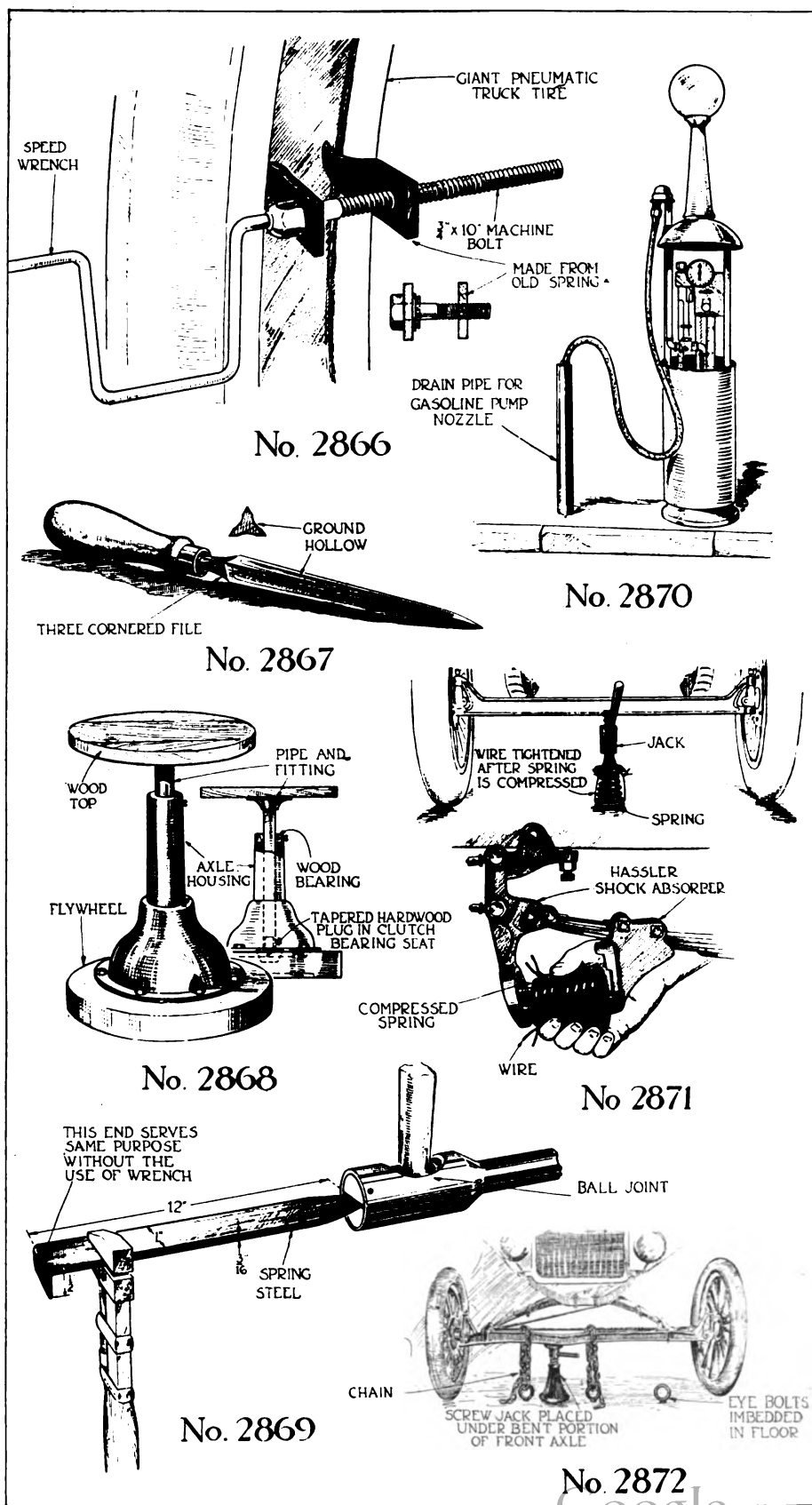
No. 2871—Compressing Hassler Shock Absorber Spring—By placing the spring beneath a jack which is in turn beneath an axle, lifting the jack and then tying the coils together with wire, the spring can be compressed and inserted.—F. H. Scott, Gutta Percha & Rubber, Ltd., Vancouver, B. C., Canada.

No. 2872—Straightening a Front Axle—Two eyebolts imbedded in the floor are used to hold the axle down, chains being used. A jack pushes the bent part up. If the bend happens to be the other way, the axle can be removed from the car.—Reader.

MAKE A DOLLAR

SEND in a sketch and a brief description of the device you used to solve some particularly difficult problem. Sign your name and furnish us with the name and address of the concern with which you are connected.

Motor World will pay a dollar for every idea accepted for publication.





Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

Sells Cars by Loaning Them for a Day

THE would-be motorist in New Orleans can use an automobile all day, free, except for the cost of the gasoline, put it to all the tests of his business and family requirements, and then buy it or not, just as he has decided whether it fulfils all the demands he would put upon a car for his own use. This novel effort to make the passenger car sell itself in these days, when every salesman added to the payroll counts heavily, and when even the best salesmen are having difficulty in making sales commensurate with their ability, is being tried by Bell & Thomson, 931 Howard Avenue, distributors of the Marmon.

This firm announced its new plan in all the newspapers of New Orleans Sunday, January 16.

The offer brought a number of prospects to the salesrooms and resulted within three days in more sales than were expected. This plan has been successfully used with trucks in the lumber industry and in the oil fields in Louisiana.

Getting Ideas

BUSINESSES grow on ideas and often opportunities to get ideas, opportunities on our very doorsteps, are neglected. In this story is a suggestion for the head of any considerable dealer or distributor organization to obtain ideas from his own employees. Harry T. Gardner, carriage sales manager of the Packard Motor Car Co., started an idea club and in 30 days got from the people in his department 43 ideas for its operation, 70 per cent of which will be put immediately into practice. The plan followed was built around a contest. An idea was expected from every employee, to be written out in detail, sealed and submitted. After all the ideas were turned in a digest was prepared of each and submitted without any identification of the author to all the employees for grading as to the excellence of the ideas, the gradings running from 50 to 100 per cent. The individual gradings of each

idea were then added and an average struck and the highest rated won a cash prize for its author. In addition, all male members of the club were given a dinner and the girls two seats at a theatre, at the expense of the Packard company.

"My How Tempus Fugits" Said the Factory Head When He Got This Letter



JONES, the president of a busy factory, was about as accessible to an automobile salesman as Henry Ford has been to representatives of the press for some time past. Burton, the salesman, had been trying to see him for months, but every time he called the same old answer came back: "Too busy to-day." Now, Jones was sold on the automobile because he had had one for the use of his family for several years. But he still regarded it solely as a pleasure vehicle. Burton wanted to sell him a coupé for his personal use in business.

One day Burton saw Jones waiting for a street car. He didn't approach him, but took out his watch and took

the time on the length of Jones' wait for the car. It was seven minutes.

Returning to the salesroom, he wrote Jones as follows:

"How much is your time worth?"

"To-day you spent seven minutes at the corner of Main and Orchard streets waiting for a car. This wasted time in itself doesn't amount to much, but have you ever stopped to figure what the total of the time you lose in this way is in one year? We read occasionally of men whose time is valued as high as one hundred dollars a minute. Think how much a seven-minute loss would cost them.

"No doubt you have considered the use of the street car an economy, and the cost per mile is unquestionably less than if you used an automobile. But can a man, whose time is as valuable as yours, afford these little seven-minute losses? Is it economy to save a few cents in transportation costs at the expense of your time?"

"A coupé at your door when you have to make these trips around town would add many useful minutes to each day."

The next time Burton called he got by the guardian of the gate.

Cleanliness Helps Sell the Garage

"**C**LEANLINESS is next to godliness' is a good motto to be followed in every walk of life," said a well-known Columbus garageman, while talking to a good friend recently. "I find it fits the garage business quite perfectly. If one maintains a dirty and unkempt garage the customers will not be attracted, as they desire cleanliness and order above all things. I have had the experience and I know. Formerly my garage was dirty and the floor was littered with filth and I wondered why people were not coming in as well as formerly. Someone gave me the tip and I immediately got busy, with the result that my business is increasing month by month. I find that it pays to employ sufficient janitor help to keep the garage and even the repair department quite clean."

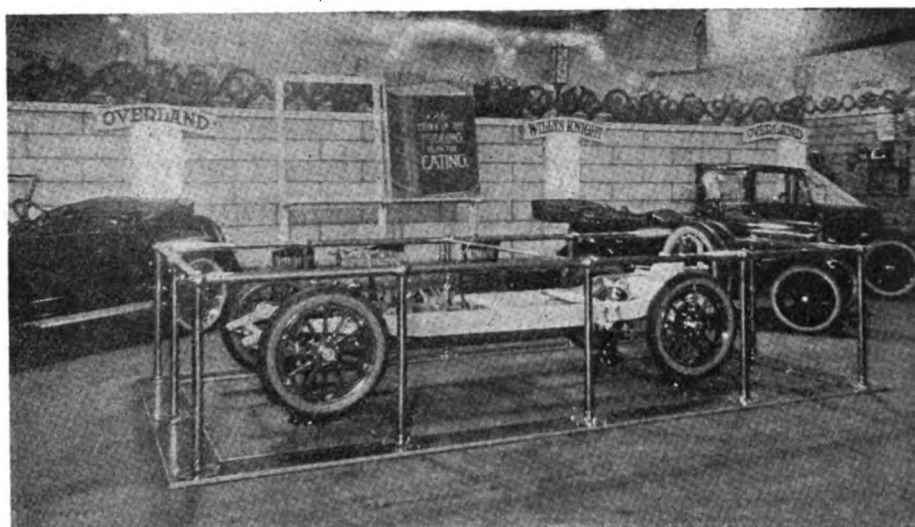
How One Dealer Made His Show Space SELL

AT the Toledo show, held recently, L. G. Peed, branch manager for Willys-Overland, Inc., created a sensation with his "Proof of the Pudding" feature in his company's exhibit.

When Peed took charge of the Toledo branch he found some testimonial letters from well known townsmen testifying to the excellence of Willys-Overland cars. Peed decided to put them to work at the show.

After securing permission to use them he had these letters reproduced on canvas frames six feet high and five feet wide. These were made up in the form of a huge book, which was lettered on the cover: "The Proof of the Pudding Is in the Eating." This book was mounted on a rack in the rear of the exhibit and a colored boy slowly turned the leaves throughout the day.

The letters also were used as copy for Peed's newspaper advertising. A typographical error in one of these ads was turned by Peed into a mighty effective piece of publicity. He printed as an advertisement the letter of a man who told how his car had run in great



A Show Booth That SOLD Cars

Testimonial letters from satisfied owners were made into a big book which cried out to visitors passing the booth for a Toledo dealer. The title of the book was "The Proof of the Pudding Is in the Eating"

shape for 1400 miles. As it happened, this man phoned to say that his car had run 14,000 miles, not 1400. So Peed ran another ad with a bold face heading: "Mr. — Misquoted." Then

followed the correction showing that the car had run ten times the distance first advertised. From the comments heard, it seemed as though everybody in Toledo had read the "misquoted" ad.

The Accessory Dealer's Corner

Congratulates New Car Owner —Gets Accessory Sales

THE news columns of country newspapers often carry the information that a car has been purchased by a resident of the territory. One rural dealer finds such items a great source of business by watching for the announcements and mailing each purchaser a letter congratulating him on his purchase and wishing him much pleasure and enjoyment in its use. He also uses this occasion to solicit patronage when in need of accessories, enclosing with the letter a coupon good for 50 cents' credit upon the first purchase amounting to five dollars or more. The dealer has been able to trace much of his business direct to this method.

A "Striking" Demonstration

HERBERT BROWNLEE, of the Saffold Garage, Cleveland, had stocked some non-scatterable glass for windshield and enclosed body replacement, but it did not attract much attention until a windshield of the same was placed in the show window in the path of a three-pound sledgehammer tied to the wall. A sign announced that at 2 p. m. of a recent Saturday the hammer cord would be cut for a public demonstration of the safety of the glass. About ten customers were on hand to witness the stunt. The glass suffered a score of cracks from the hammer blow, but held in the frame. Three immediate and four deferred or-

ders for the glass resulted from the demonstration, which "broke the ice" of introduction more effectively than it did the windshield pane.

Good Publicity and Profit in This Plan

MUCH publicity and increased sales resulted from this unique advertising plan. A dealer made up an attractive display of accessories suitable for any car, the display containing only one of any single accessory. This display was placed in the window with a card announcing that it would be sold as a whole on a certain date to the highest bidder. The local newspapers carried large display advertisements in which this special was announced, the advertisement carrying a complete list of accessories included in the display.

At the bottom of the advertisement appeared a form for use in mailing in bids for the convenience of those who might not be in a position to visit the store in person and yet might wish to enter a bid. Every person visiting the store during the period was given a form on which he could enter his bid and deposit it in the box provided for the purpose. The display and announcement brought a great many people into the store to enter their bids and a great many sales resulted. Bids were opened on the day advertised and the goods sold to the highest bidder, the amount bid was a trifle over the cost of the goods, and the plan was a good ad.

"Thanks" Ad Brought Business

AT the Wisconsin hardware dealers' convention in Milwaukee recently, the question box revealed this: "Are tire sales profitable?"

In discussing the subject, one dealer attending the convention said: "People thought I was a good hardware merchant, but they didn't know anything about my knowledge of accessories and tires. They went to a neighboring town where there was a regular accessory store specializing in automotive goods and service — until I advertised to the public a vote of thanks from myself to my employees in the accessory department. Then folks began to come my way and I got my share of the business."

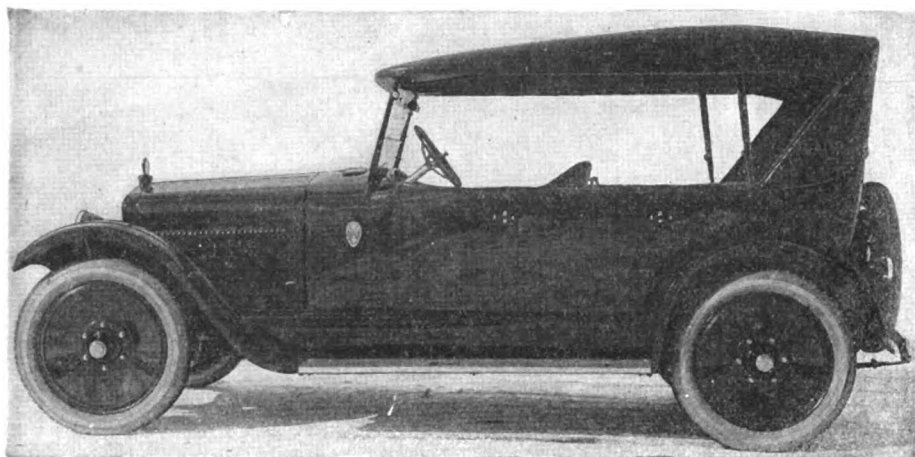
Repainting Outfits Increase Accessory Sales

REPAIRING and refinishing outfits are in demand about this time of year, especially with the abnormal percentage of old cars that are at present in use.

Saffold Garage, Cleveland, keeps such supplies in conspicuous display on its accessory counter, with the salesman able to give practical advice on selection and use of the same. These sales usually lead to further and permanent sales of high-grade soap, polish, and similar "appearance necessities."

Wills-Sainte Claire Now Offered to Public

*Strong Merchandising Features in New 8-Cylinder
Product of C. H. Wills Plant in Marysville*



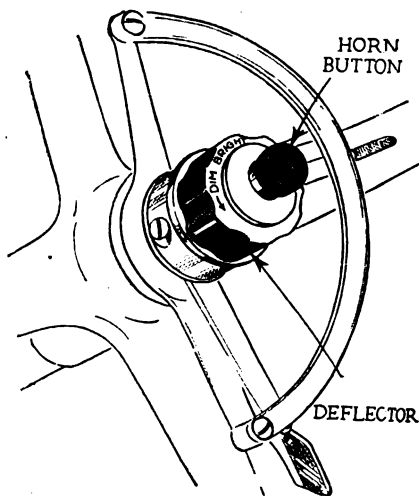
The Wills-Sainte Claire touring car which sells for \$3,500. Disk wheels are standard equipment and a number of articles that are ordinarily classed as extras are included in the equipment

Specifications of the Wills-Sainte Claire

Engine—8 cylinders, $3\frac{1}{4} \times 4$ in.
Cooling—Thermosiphon.
Starting, lighting and ignition—Delco
Carbureter—Zenith
Clutch—Dry disk
Wheelbase—121 in.
Chassis lubrication—Alemite
Battery—Willard
Tires—32 x $4\frac{1}{2}$ cord
Price — Touring and Roadster,
\$3500 (Enclosed body prices to be announced later).
Manufacturer—C. H. Wills & Co.,
Marysville, Mich.

WITH the formal opening of show-rooms in New York and other cities this week, the Wills-Sainte Claire makes its formal bow to the public and deliveries to distributors and dealers will be made just as fast as the factory can turn the cars out. The introduction of this new car has been well planned and worked out and just sufficient details have been given out to whet the curiosity of both trade and public and the stroke of genius that thought out the "Private Trade Opening" before the display to the public was a good one and brought most of the dealers handling other cars in to view for themselves the new creation.

The new car presents a great number of features that are distinctly "Merchandising features" and are placed on the car to give it a "Different" appearance and to give to the owner many new conveniences, some of which have not been



The magnetic control of the deflector in the headlamps is just under the horn button

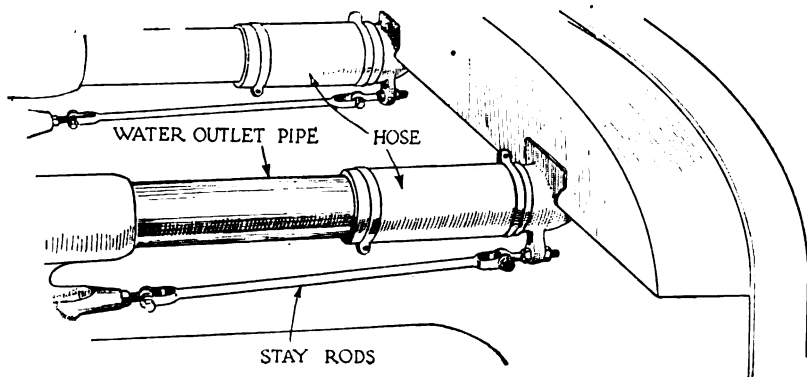
seen on any other car. These, in addition to the excellent mechanical features will undoubtedly be of great assistance to the dealer.

One of the points on which the greatest stress is laid is the extensive use of molybdenum steel throughout the car and it is stated that this is the first car in which the use of this material is carried out on such an extended scale.

Engine

The engine has many novelties. It has eight cylinders, in two blocks of four, these being at an angle of 60 deg. to each other. The cylinder flanges are cast well up on the cylinders due to the design of the valve mechanism, thus allowing the block arrangement to be very compact. The valves are in a straight line in the head and are operated directly by the camshaft and cams which run over the head and are completely enclosed and lubricated by a drilled oil channel. This is the only car on the market so far with this type of valve mechanism. The camshaft is braked by a 30-lb. spring up to a speed of 360 r.p.m. and when the shaft reaches this speed, the brake is automatically taken off and the shaft runs free.

The mechanism driving the camshafts, fan and motor-generator is quite off the beaten path of design and of course, due to the new design of the overhead camshaft, many new mechanical contrivances have had to be introduced. The crankshaft drives the half time gear which is directly above it, and integral with this gear is a spiral bevel gear which drives the two inclined shafts, which, through another set of spiral bevel gears, drive



There are two radiator stay rods, one under each water outlet pipe, doing away with the rod to the dash

the camshafts. These gears and shafts are all fully enclosed, but have inspection plates so that they can be quite easily gotten at. The half time gear also has an extension to the rear to which is attached a flexible steel ring universal joint. On the other side of the joint is the shaft that drives the motor generator and the distributor is driven from the same gear. In front of the gear is the three bladed aluminum torpedo type fan which operates through a governor clutch. Up to a speed of 270 r.p.m., the clutch drives the fan at the same speed as the gear, but above this speed, the clutch throws out, and while the fan does not stop revolving, yet it does not take any power to run it.

As a further means of decreasing gear noise, the timing gears are split and have composition paper washers between the sections. This deadens the ring of the gears so that when struck with a hammer, they sound as if made of lead.

The Zenith carbureter is of the double jet, non-adjustable type and is hung on a combination manifold between the two blocks, this manifold acting both as an intake for the mixture and as an outlet for the water, there being an extension on either side to which the upper hoses are clamped. Two stay rods extend from these extensions to the radiator, these being underneath the hoses and doing away with the customary single rod extending from the dash to the upper radiator tank over the center of the engine.

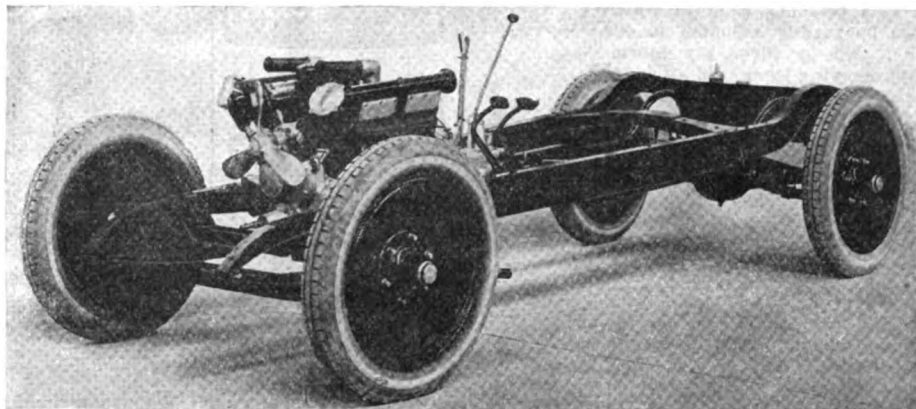
The cylinder blocks are of cast iron with 3 per cent nickel and with walls only 3/16 in. thick. The valve guides are of steel and are held in the cylinder heads with a press fit. The lower end of each cylinder is beveled to permit insertion of piston rings without special tools. The crankshaft is machined all over, is of the three bearing type and has bearings of generous size. Lubrication to the connecting rods is from the main bearings. The oil is pumped to the top of each of the main bearings and is picked up by a little scoop formed in the shaft, being thrown from this point by centrifugal force to the connecting rod bearings through holes drilled through the shaft. Each main bearing takes care of two rod bearings. Both main and rod bearings are bronze backed babbitt lined.

The rods are also finished all over and rods and pistons are assembled selectively by weight, the piston weighing 1 lb. 3 oz. Pistons are cast iron with highly polished tops, have two rings above the pin and one below. The wall is relieved around the pins.

The oil is carried in the conventional sump which has, however, a bronze screen all over it. There is a pressure regulator on the right side at the bot-

tom member of the frame and the engine arm. Between the arm and the frame is a broad curved leaf spring and between the frame and the nut on the bolt is a strong coil spring. This keeps the engine arm tight against the leaf under normal conditions, but allows it to lift if the frame weaves.

The clutch is of the dry disk type. The driving disks are polished steel and the driven disks are slotted with Raybestos



Chassis view of the Wills-Sainte Claire showing the eight-cylinder engine

tom of the crankcase and this can be regulated from the outside and requires only the lifting of the hood and a slight turn with a wrench. As an additional safeguard in case the oil gage becomes inoperative, there is a metal rod which dips down in the oil reservoir and by withdrawing, level of oil can be seen.

The gasoline is carried in a tank at the rear, this being provided with a gage and a reserve tank operated by a lever on top of the tank. Fuel feed to the carbureter is by vacuum system, the vacuum tank being attached to the front of the dash. There are two individual exhaust systems each with its pipe, muffler and tail pipe, one for each block.

The radiator is of ample size to take care of the thermosiphon system of cooling which is used. There are two outlets and two inlets. The powerplant itself is four point suspended and the two rear arms are rigidly attached to the frame. The front supports, however, are spring suspended with a combined leaf and coil arrangement. A bolt passes through the

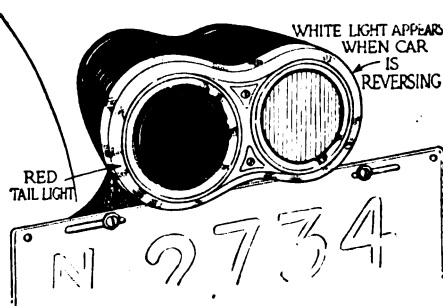
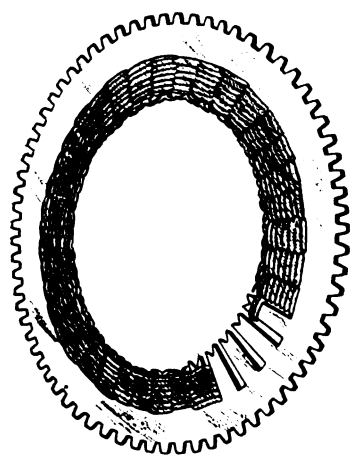
woven through the slots much like basket work. The ends of the slots are then bent over to hold the weave in place.

The gearset is of the selective sliding type with three forward speeds. The rear axle is of the semi-floating type and the ratio is 4.4:1. The brakes are of the external and internal type, Raybestos lined and provided with equalizers. Springs are half elliptic, front and rear.

Ball bearings are used in the axle, wheels, gearset and other points.

Many conveniences for the driver and passengers have been introduced, the most striking of which is the "Courtesy" lamp on the left side of the body just ahead of the front door. This lamp, which an odd shaped reflector, may be used to light up the runningboard or to illuminate the features of pedestrians on the road at night. The tail lamp has a double lens, one red and one white. The red light shows at all times when the proper switch is on and the white light is lighted automatically when the gear

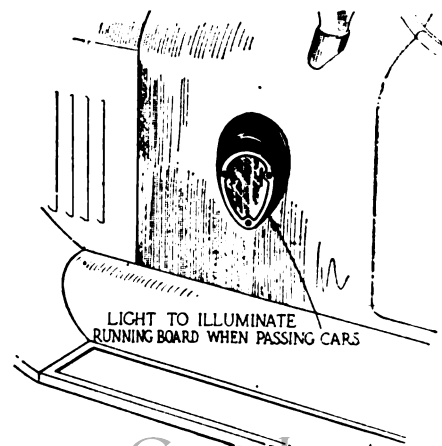
(Continued on page 42)



Above—The double taillamp with red and white frenzel glasses

Left—The clutch disks are slotted and Raybestos rope is woven like basket work

Right—The courtesy light will tell the driver whether the pedestrian is friend or "foe"



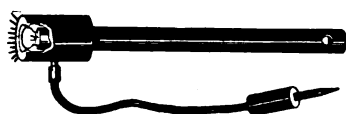
Automotive Equipment

SECURITY TIRE KNIFE

This tool has a knife which can be readily adjusted to cut one, two or three ply fabric. By removing the guard all edges of the knife can be whetted. The tool provides a combination of eight knives in one. Price, \$1.50 each.—Security Tool Works, 115 South Clinton St., Chicago, Ill.



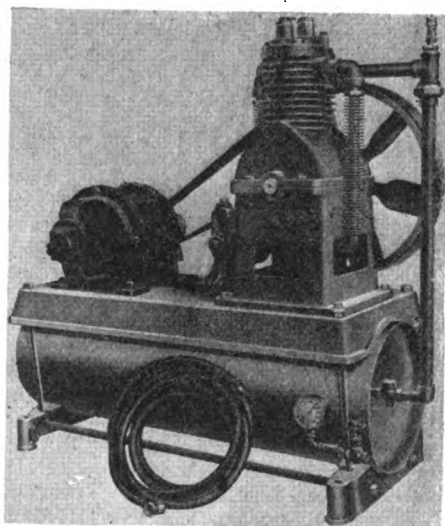
Security Tire Knife



Thompson Battery Tester

THOMPSON BATTERY TESTER

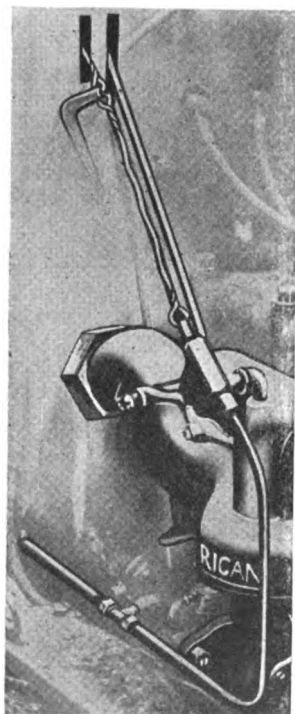
This is a cadmium outfit for the use of the car owner. It consists of a cadmium electrode which is enclosed in the base of the instrument. The piece of cadmium is connected to the test point through a small electric bulb. When the cadmium is submerged in the electrolyte and the test point is on the positive terminal of the cell, the light will burn brightly if the cell is fully charged. If it is undercharged or discharged it will burn dimly or not at all. A short circuit is indicated by the light burning when contact is made with the negative terminal. Price, \$3. Thompson Battery Tester Co., Greensburg, Pa.



Curtis Two-Stage Compressor

CURTIS TWO-STAGE COMPRESSOR

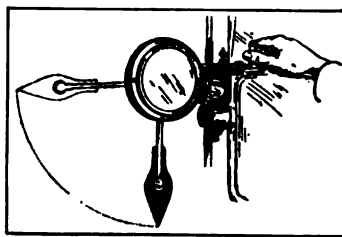
This unit consists of two-stage compressor, intercooler, tank, motor and base. It will provide pressures up to 200 lb. A splash oiling system is used and an oil level gage is provided. An automatic starting and stopping device is furnished at additional cost. The outfit may be purchased complete or in separate units.—Curtis Pneumatic Machinery Co., St. Louis, Mo.



Sure-Start Fuelizer

SURE-START FUELIZER

This device is designed for the Ford engine and consists of a hot-spot, two-way intake manifold with automatic primer. Hot and cold intake pipes with butterfly valve between permit regulation of the heat of the mixture, which is delivered to the engine by a lever on the dash. Owing to the small intake pipes, a high velocity of mixture is obtained at low speed. The primer is operated by pulling the choke and this allows a spray of gasoline to go directly into the cylinders, independent of the carbureter. Price, \$15.—American Manifold Co., Jackson, Mich.



Autophore

AUTOPHORE

A combination reflector, parking light and signal device. It is mounted on the side of the windshield and is operated by a button located conveniently for the driver. It is visible from all sides. The 4-c.p. bulb only draws current when the signal is in an indicative position. Price—\$12.—Automotive Accessory Co., Philadelphia, Pa.

MOTOR HEART

This is a device for graphically indicating the temperature of the cooling water. When the temperature passes safe limit the colors of the center glass change from red to purple, matching the danger color to one side. The device is substantially constructed in two sizes, standard and junior. The temperature recording metal tube is flexible, thus permitting installation in obstructed radiators.—Patented Specialties Corp., 46 Center Street, Newark, N. J.



Motor Heart

PILOT BRAND TOOL

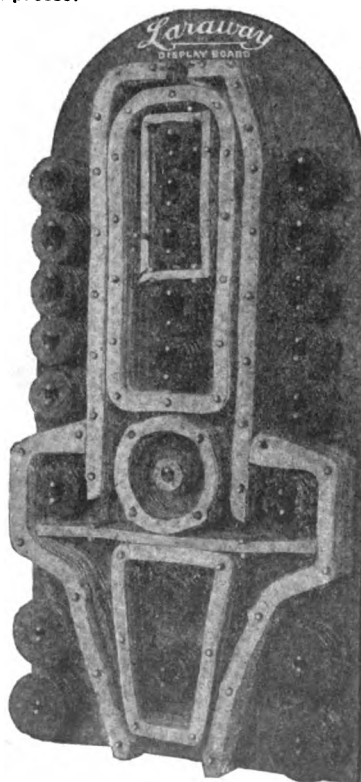
Included in this line of tools are spring callipers and dividers of various types and sizes, breast drills, hand drills, hacksaws, wood planes and micrometers. Complete description and catalog will be sent upon request.—Consolidated Tool Works, Inc., 251 Broadway, New York City.

HEWITT TIRES AND TUBES

These tires are guaranteed as to materials and workmanship, but no definite mileage is promised. Both cord and fabric tires are manufactured, the former in sizes from 30 x 3½ up to 38 x 7 in., and the latter from 28 x 3 to 37 x 5 in. Tubes are made in both gray and red rubber.—Hewitt Rubber Co., 240 Kensington Ave., Buffalo, N. Y.

LARAWAY DISPLAY BOARDS

These boards are for the purpose of displaying cork and felt gaskets and washers. Wooden pegs which fit into the holes in the gaskets and washers are provided for mounting. Nos. 1, 2, 10 and 20 are for Ford washers and gaskets, and the prices on these boards, completely equipped, are \$25, \$30, \$35 and \$40, respectively. No. 3, carrying an assortment of felt axle washers, sells for \$35. No. 4 is for Dodge and No. 5 for Chevrolet.—Laraway Specialty Co., 546 West Washington Street, Chicago.



Laraway Display Board

Des Moines Show Promises

Big Spring Business Revival

**Dealers Convinced That Tide Has Turned in Iowa—
Consecutive Enclosed and Open Car Exhibits Idea
Gets First Try-Out**

DES MOINES, IOWA, March 8.

THE tide has turned in Iowa. While the break is far from complete, it is headed in the right direction and the motor car dealers of the State have started to fight back to the positions they formerly held.

Undoubtedly one of the greatest results of the twelfth annual show of the Des Moines Automobile Dealers' Association, held March 2 to 10, was the crystallization of sentiment among the men of the trade that the worst has passed and that conditions have improved.

Up to now the small town dealer has been gun-shy. He has been afraid of general conditions. To illustrate, a Waterloo distributor called up one of his dealers and asked him to come down to Des Moines to the show. The quick response was, "You go to H——; I'm not going down there and get loaded up with a lot of cars I can't sell."

The dealer in the small town has been afraid for four weeks to take his own judgment that conditions are improving, but when he got into the show and found that a big majority of his fellow-dealers were reporting business as looking up he decided that his judgment was right and that the break had come.

The Des Moines show this year is an innovation in that it is two complete shows, the first four days being devoted to open models and the last four to enclosed cars. As this is written it is too early to determine whether the idea is a success. The enclosed car show is only in its second day, and by reason of the fact that the out-of-town dealers were slow in getting in, it would be unfair to hazard an opinion on the worth of the new arrangement.

The Des Moines show was forced to such an arrangement by the fact that the only place in which to hold the show is the Coliseum, which is entirely inadequate to house a complete showing of both open and enclosed models.

Up to last night the attendance of the public was just about equal to the 1920 attendance of the same date. The dealer attendance has shown a material decrease, and not until Monday was the

attendance from out-of-town dealers a real factor.

This delay among the out-of-town dealers is attributed considerably to the fact that the Iowa Motor Trades Bureau planned big meetings for Monday night and Tuesday and many of the dealers waited so that they might attend these meetings.

There were more out-of-town dealers at the show Monday than during the entire four days preceding.

Actual sales at the show have shown a falling off from that of previous years, but there have been a number of sales, and knowing conditions as they exist, local dealers say they are entirely satisfied with the sales results.

Many Strong Selling Features

This year's show received the best publicity of any show in the history of the Des Moines Dealers' Association. Newspapers co-operated as they have never done before. Considerable publicity was given the show in the two weeks preceding by contests conducted by two of the local dailies. One paper offered a prize for the person suggesting the best slogan for the show, which resulted in the phrase "U Auto See 'Em at the Coliseum," while another had a contest for pupils in the three high schools for the best poster drawings to advertise the show.

One of the most interesting features in connection with the double show was the fact that Saturday night every open car in the Coliseum was removed from the floor in a period of eighteen minutes and the enclosed cars were all in place inside of fifty-two minutes. This change was made so quickly that without previous announcement the show was opened to the public Sunday for exhibition only, and with a sacred band concert as the main feature.

Sales managers and manufacturers' representatives present at the show generally recognized that during the past six months there has been no section of the country harder pressed, so far as sales conditions were concerned, than Iowa.

This is largely the result of the fact that the one big market for cars in Iowa is the farmer and for six months he has been entirely removed as a buying factor. The Iowa farmer harvested his 1920 crops under the most expensive conditions in history, but at harvest time

was confronted with a market 50 per cent below that of the previous year.

With the second largest corn crop in the history of the State, crop valuations were reduced by lower prices to 40 per cent below those of 1920.

These facts put the farmer in an ugly mood. He held his grain for higher prices and went without things he didn't actually require.

But during the past thirty days conditions have begun to show an improvement. Grain prices have strengthened and the movement of grain which normally starts immediately following harvest, began in February. This, of course, had its effect on credit conditions and they have shown a decided improvement. While in some parts of the State bankers are still sitting tightly, for the greater part of the State there is a markedly easier tone noticeable so far as credits are concerned.

The truck dealers say things are looking up. There appears to be the opening of a demand from the farmer and this is considered unusual not only in consideration of the general conditions noted but from the further fact that usually the farmer has been on the market for trucks at harvest time. Prospects who four months ago would not even talk to truck salesmen are now ready to listen and many of them admit that within the next ninety days they will be on the market.

Conditions are going to improve slowly. The best thinkers among the motor car and truck dealers of the State recognize that they are going to be compelled to go out and fight for business as they have never done before and they realize that in this fight the dealers who succeed are going to be the ones who have organizations efficiently prepared to battle, with their decks cleared of all frills and non-essentials for action.

One of the outstanding features of the Des Moines show was the dinner given Monday night by the Iowa Motor Trades Bureau for the 400 out-of-town dealers who were at the show. In addition to the dealers more than 100 members of the Iowa Legislature and representatives of the leading banks of Des Moines were the guests of the Des Moines dealers' association at the banquet.

George M. Graham, vice-president of the Pierce-Arrow Motor Car Co., brought a wonderful message of courage and sane optimism for the trade, which found a ready response and was a factor in the psychological awakening.

Brooklyn Show Brings Normal Demand

Selling Greatly Stimulated by Beautiful Exhibit—Rural Districts Respond

BROOKLYN, March 9.

OUT of the Tenth Brooklyn Automobile Show, in the 23rd Regiment Armory here this week, dealers will plunge knee-deep into a market for automotive products that has all the earmarks of normalcy.

In fact, several of the exhibitors, including a few of the Long Island distributors, are more concerned just now about how many cars they can GET than how many they can sell this spring.

They're selling now. Sales resistance began to weaken right after the New York show and, with the exception of a few days just following the recent heavy snow storm, sales have grown in volume to a point which compares favorably with the same period in previous years.

This is particularly true in cars and accessories. There is indication of a fairly good demand for trucks of all capacities as spring progresses, but the market has been somewhat adulterated through the sale in Brooklyn and New York of some orphaned products and some of the American army equipment that has come in from abroad in the past six weeks.

So the Brooklyn show, unlike many of its predecessors throughout the country

this year, is an agency for the speeding up of selling rather than a starter. The industry had gone over dead-center and was hitting regularly through the first up-grade stages of spring business when the doors opened.

But, the fact that the sales curve was bending upward did not lessen the determination of the Brooklyn Motor Vehicle Dealers Association to make this year's show a great merchandising project. The growth and influence of the association for merchandising on a higher plane had been marked during the past year and its members went into the 1921 show determined to make it their greatest effort.

The appropriation for publicity and promotion was doubled. Advertising of striking character was sent broadcast through Long Island and the adjacent territory's newspapers. Trolleys, subways and elevated systems carried posters.

The result of the aggressive advertising campaign was reflected in an attendance of high quality—of the kind of people that are real prospects. There is significance in the fact that this year's attendance equals last year's, although the dealer association actually issued 60,-

000 less invitations than last year. The admission prices were raised from fifty to seventy-five cents and the admission receipts have more than doubled last year's.

In addition to speeding up selling in Brooklyn proper, the show is having a most satisfactory stimulating effect in the outlying district of Long Island which is part of the Brooklyn distributor territory. The attendance of rural dealers was good and at the distributor meetings they bought cars in a volume that was a revelation to the Brooklyn distributors.

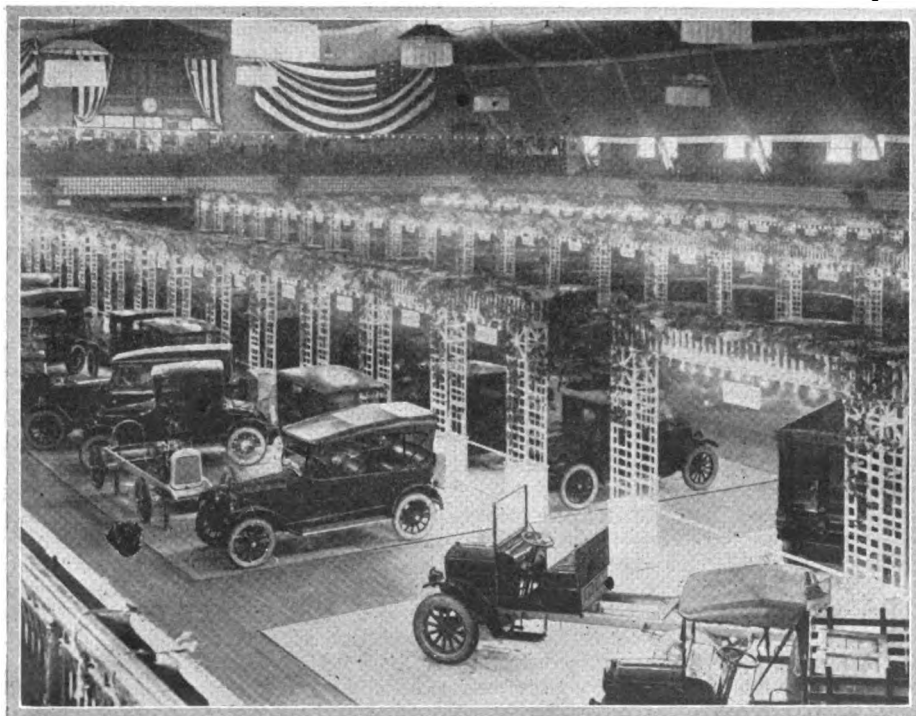
There was much to commend in the efforts of the individual exhibitors to make their spaces real selling forces. There was a good percentage of bright show jobs and stripped chassis to catch the casual eye, but in these there was shown a desire to display something desirable to the general run of show visitors rather than freakish jobs to amuse them. The special show jobs were designed to SELL those cars, and in this the exhibitors were successful.

A strong merchandising element of the show was the mingling of cars and trucks in the exhibits of some of the dealers who handled light commercial vehicles. When exhibits of this kind were made, particular attention was given to making the truck line attractive. A good example of this effectiveness was a special florist's light delivery wagon shown in the booth of Bishop, McCormick & Bishop, Dodge dealer. The stock body was done in violet with a spray of carnations painted on the sides and the slogan: "Say It With Flowers." The job was equipped with violet disk wheels. Lexington and Liberty showed bodies done in the new Harding blue. The truck exhibits were attractively arranged to interest prospects with many bright, practical body jobs.

The show, as a whole picture, was beautiful. It was a summer garden decorative scheme with high white open lattice balustrades supported by double open lattice panels on square pedestals. These were covered with smilax which also drooped from the balcony which was done in a green and white panel scheme. The whole show was under a canopy of royal blue and white. The summer garden idea was carried into the balcony, where accessories were exhibited for the first time, and into the entrance where the decorative scheme was a great garden gate.

In Brooklyn the dealers decorate their salesrooms, many of which are on the same street as the armory, and this year the general decorative scheme of the armory was carried into the salesrooms with pleasing effect.

Cars and Trucks Share Floor at Brooklyn



Cars and trucks were shown together at the Brooklyn Show and there was a strong merchandising atmosphere throughout the big exhibit

Syracuse Show Reveals Sales Possibilities

SYRACUSE, March 13.

TO the casual observer who went to the annual automobile show of the Syracuse Automobile Dealers' Association this week, there could be only one possible impression—that all Syracuse and Central New York had gone mad with the desire to own an automobile. It was likewise apparent that every dealer exhibiting in this, the largest show ever held by the association, faces an exceptional season for selling possibilities.

Starting on Monday, opening night, with a packed house, made up mostly of "paper" holders, the crowd was only a trifle smaller on Tuesday, when real money was paid for admissions. Wednesday the crowd of Monday night was duplicated, and on Thursday, when an extra charge was made for admissions, the most productive attendance of the week was present. The last two days of the week brought equally large numbers, and now a marked apathy toward business has given way to a genuine and seemingly well founded enthusiasm.

As for actual sales reported on the floor dealers have been somewhat reticent about making any statements. It is known that one dealer in especially high priced cars sold a fair share of his total quota for the year, which, incidentally, is more than that same dealer heretofore has been able to sell in an entire season.

There was, however, a seeming tendency toward a general downward revision in the buying classes. Persons who in other years were prospects for \$3,000 cars were looking at models selling below \$2,000. Small cars took the place of medium priced machines in the eyes of many, and lively interest in cars around \$1,000 was evidenced throughout the week.

All dealers holding distributing rights brought in their dealers from surrounding territory, and the enthusiasm which was everywhere apparent seemed a splendid tonic for the merchants from smaller towns and villages where the outlook for sales had been dim. The fact that the show drew so many lookers-on from the neighboring counties was a great encouragement to sub-dealers and some good wholesale contracts were placed.

There were few really new features in the show. The arrangement was along the same general lines followed in other years, but all details seemed to have been splendidly handled by Howard H. Smith, manager of the show and secretary of the dealers' association. The decorative scheme, though more simple than in

some other years, was artistically done, and took away all suggestion of armory and made of the immense drill halls beautiful show places.

The show served to usher into the Syracuse market for the first time the Cunningham car, which is to be sold here by Frank J. Meldrum. Franklin showed its first special show job in the new design, a beautiful sedan attracting much attention.

Weather conditions were exceptionally fine, only one day of rain interfering with the fullest freedom in making demonstrations. This fact alone was a ma-

terial help in selling cars, the dealers believe.

One of the unusual features of the show week was a dinner given sub-dealers, salesmen and other attachés of the Syracuse Motor Car Co., in their show room. The company's orchestra, which is made up entirely of members of the firm and employees, furnished music, and the various sales heads made optimistic selling speeches.

No count on actual attendance at the show was given, but Manager Smith announced that last year's attendance had been exceeded by about 40 per cent.

Quincy Strengthens Sales Forces After Successful Show

QUINCY, ILL., March 7.

THIS city has been experiencing the same conditions that have been felt elsewhere throughout the country—conditions growing out of a buyer's strike—and only until very recently has there been a really apparent tendency on the part of prospective buyers to come into the market. Marked impetus to this forward movement has been given by the Third Annual Automobile Show, staging only passenger cars and accessories, which closed Saturday night after having been open for five days. The night of the opening of the display the dealers held a banquet which was presided over by Morris Adler, president of the Quincy Automobile Trades Association, with an address of welcome by the mayor of the city, at which Father Gloom, disguised for the part, was summarily arrested and from which he was thereupon evicted. Arresting gloom and banishing him from dealer organizations were among the objects of the show.

The show was very handsome in its decorations, probably as attractive a show as has been held in any city of like size—40,000.

While comparatively few sales of cars were made, as the actual result of the show, there was a fair percentage of business done at the accessory booths. The attendance was encouraging, accurate figures showing that in paid admissions there was an increase of 100 per cent over that of last year. This is made more noteworthy from the fact that last year the admission price was 28 cents while this year it was 50 cents; but a year ago the show was held a mile from the city.

The show has contributed its portion to breaking the backbone of the buyer's

strike, which primarily has been due to the bitterness of the farmers as a result of lowered prices for their oats, corn, wheat, hogs and cattle, and it will be aided by warm weather. Already farmers are beginning to feel better for they are able to get back to work and their thoughts are shifting from the past to the future. With their change of attitude the outlook of the distinctly country banker, which has been darkly—and very darkly—colored as regards the automobile industry, will suffer a like improvement. But this much must be said for the country banker—he has had and still has his money tied up.

Most of the dealers in the city—or at least their salesmen—have lived here most of their lives, or long enough to have established a wide acquaintance, and they are resorting to this acquaintance to force a return to business. While sales efforts abated somewhat prior to the opening of the show, so that dealers might sense the position of the prospective buyer, they will be redoubled now that they have obtained an insight into his receptive buying mood. Not one dealer but understands the element that will be responsible for sales—salesmanship, a go-get the business disposition. More salesmen are being put at work; dealer organizations are being strengthened; offices of professional men are being systematically canvassed; city directories are being brought into service; personal knowledge of who are the present owners of cars and who are probable prospects or changes, and a deadly campaigning of these latter with monthly letters that can only mean eventual capitulation—all these plans are being brought into play to bring back business.

Factories Start Larger Production

BIG STEP-UP SHOWN IN MARCH SCHEDULES

February Total With Ford Resumption Dwarfs January— Look for Steady Gains

DETROIT, March 10—Indisputable evidence of the upward trend of the automotive industry is reflected in the step-up in production in the Detroit territory during February as compared with January reports showing total production in February of 53,040 against 14,615, for the month previous. These figures include 31 factories in Detroit and Michigan, and Willys-Overland and Knight plants in Toledo.

What appears to be an increase approximately of 38,000 in the February figures includes Ford production in Highland Park and branches totaling 35,000 cars and trucks, about 10 per cent of which were trucks, making the actual passenger car increase approximately 35,000. With Ford figures eliminated, the increase in February was 3425. Ford figures were not included in the January totals because the Highland Park plant was closed, though, according to a statement by Henry Ford, approximately 30,000 cars and trucks were assembled in the assembly branches.

Increase was general throughout the territory though sharp decreases, noted in the figures of two of the largest producers due to various causes, prevented what otherwise would have been an increase of about 40 per cent in production over January. The instances of decrease noted were not due to recession in demand as between the two months, but rather to lack of certain materials, lack of complete working organization due to employees having left when depression became acute, unbalanced inventories which forced certain departments to remain idle while others were working steadily, and similar handicaps brought about by the long period of depression.

Studebaker Increases Schedule

That March production will be far ahead of February, with all indications pointing to steady improvement, is certain in the opinion of leading manufacturers who already have started out on greatly increased schedules. Studebaker, which planned building 525 of the larger cars in the Detroit plant each week during the first part of February, closed the month with a total in Detroit of 2500 and started in March 1 on a schedule of 665 weekly. The plant has not taken back all the men but rather increased working time to five days a week instead of four. A schedule of a full week of five and a half days will be entered on April 1.

Paige production in February jumped to approximately 63 per cent of normal and the plant is now operating on a 75 per cent production basis or about 72 cars daily, according to President H. M. Jewett. The big demand for cars, Jewett said, necessitated a gradual step-up. It is expected to hit normal 90 to 100 cars daily soon. Paige is building trucks only on orders.

Packard Business Improving

Packard reports good sales demand and is adding to the working force each day. Vice-President Roberts says trucks are moving and activity in that end will increase steadily. The company produced about 30 per cent of normal on single six and twin six in February. The Dodge plant is still down and officials have not announced an opening date.

Reo is again working 4000 men full time and 1000 half time after continued operations with a full force of 5000 at half time during all of the depression. The plant built about 2100 cars and speed wagons during February in ratio of three speed wagons to one car. The company now is producing about 75 per cent of normal or approximately 120 daily.

Hupp built about 700 cars in February and started on a schedule of 1000 for March. Officials report a steady improvement but will operate conservatively and do not look for 50 per cent of 1920 business volume before the end of the present year and will schedule production accordingly.

Buick is working 65 per cent of its normal force full time and built about 200 cars daily in February. One thousand seven hundred cars went to owners in January and 2900 cars in February with prospects for March of double that total according to A. B. Batterson.

Olds built about 60 daily in February, chiefly smaller cars. This jumped to 90 daily which is about 60 per cent of normal. Dorr is moving conservatively and while dealers report many prospects and improved actual demand, production will be increased slowly and in keeping with sales. The company built 700 cars in February.

Chevrolet is working full force part time and during February produced around 85 cars daily. Hudson-Essex February output was about 15 per cent of normal.

Columbia started this week on a regular production schedule after having been practically down for some time.

Forbid Mails for Test Runs

WASHINGTON, March 9—Automobile manufacturers and dealers staging speed and endurance contests in the transportation of mails will not be permitted to carry postal matter without advance authority in each case from the Post Office department.

BUYERS' CONFIDENCE RETURNS IN MID-WEST

Future Loses Terrors as Equilibrium Is Restored— Farmers Start Selling

KANSAS CITY, March 12—The increase in sales, both wholesale and retail, since the motor show, continues through the second and third week following the show. The volume is still below normal—one estimate being that scarcely half as many cars are being sold as dealers would ordinarily move. But the steady growth of business is commented upon both in Kansas City and the territory. In addition to the statements of dealers to this effect, is the significant report from one organization that finances time sales, that a marked increase has been observed in this class of purchases.

This is significant in that it indicates a loosening of the resistance to commitments—a change which affects the consuming public as well as the retail merchant. The retail merchant, whatever his line, seems rather more willing to place orders now, and the private citizen is not now so averse to taking on new obligations. In other words, confidence in the future is being restored.

A dealer who recently traveled through Kansas City territory remarked on the number of loads of grain going to market. There seems little doubt that the farmers are selling their products, which have been held so long awaiting higher prices. This movement is putting cash into the pockets and banks of the territory.

Dealers are receiving cars, but are buying only for present needs; they are not stocking with cars. But they are buying freely enough to indicate a steady flow of sales.

To-Finance Canadian Sales

OTTAWA, ONT., March 10—The Canadian Metropolitan Securities Corp., a company that will specialize in automobile financing, has been formed with a capital of \$1,250,000. The new company will act in connection with the Confederative Investment Corp., Ltd., the latter being fiscal agents for the new company. The Ritter Commercial Trust Co. of Cleveland has guaranteed the preferred dividend for ten years and undertaken to direct the management for the same period and at the end of the period to repurchase any preferred stock which may be offered at par. Officers are: President, William F. O'Connor, Ottawa; Alexander Michaud, Montreal, vice-president; Major Daniel Owen, Ottawa, secretary-treasurer.

Sales Continue to Increase Pace

CHICAGO BUYS CARS; RURAL SALES SLOW

Volume of City Buying Surprises Distributors—Shows Open Up New Era

CHICAGO, March 12—The number of actual deliveries of new cars sold at retail during the first two months of this year was equal to that for the same period a year ago, and there appears to be no let-up in the demand for new cars by city buyers. The same condition does not hold in the wholesale trade—cars sold by the distributors to their country dealers. There is very little trade in the country and as little hope of improvement until the farmers get to work, release their crops, either warehoused or represented in hogs and cattle, and forget the past. There is a feeling in some quarters that there will be no really marked improvement in country trade until along in the summer.

But trade in the city is so good that dealers are asking if it is going to last—whether it does not constitute in a measure the business left over when the slump came last August. There were many prospects at that time in the mood for buying who were frightened off by general conditions, and who, with the cut in Ford prices the following month, felt that they might as well wait a while longer to see how far prices would be cut.

Business began to pick up in January, then came the show and trade showed further advances and has been advancing ever since. The show opened up the "new era." It furnished prospects—and these prospects furnished other prospects—on which sales forces have been working ever since.

All this makes the distributor feel better—it makes him feel that the industry is becoming more stabilized and as it should be. The used car market is good, probably as good as it was in the first two months of last year. The truck market is not good.

Publicity Takes Show's Place

DAVENPORT, IOWA, March 12—Automobile dealers in this community report a 50 per cent increase in trade within the last week. An early spring and an active publicity campaign, which took the place of the usual automobile show, were responsible for the revival, they said. No adequate exhibit room could be secured, and the dealers went into an aggressive publicity campaign.

Indications are that the season will be a record one, some dealers said, and all of them have felt a business revival which has drawn expressions of surprise.

And a Dealer Is Getting the Benefit of Novel Advertising

SHREVEPORT, LA., March 11—"Babe" Ruth is having many an honor showered upon him by the citizens of this town. Among other things, he has been loaned an automobile during his stay here, and he has been granted the unusual privilege of driving it without a license. Instead of the customary numbered license plate on the car, there is the sign inscribed "Babe Ruth."

FACTORY INVENTORIES NEARING EXHAUSTION

HARRISBURG, PA., March 10—Predictions that three months will see a resumption of business such as the automobile trade has not seen for several years and confidence in the fundamental soundness of America's business institutions was expressed to-day by R. C. Rueschaw, one of the chief executives of the Reo Motor Car factory, speaking before two hundred members of the southern Central Pennsylvania Reo district.

"At present we are going ahead full steam," said Rueschaw, "and are beginning to buy again. For a time buying was at a standstill, as you know, but once more factories are after wheels, spare parts and everything that goes to make up the automobile. And as we buy, so do the manufacturers of these necessities speed up their production; building and the allied trades pick up on the wave of recovering industry and in a short time the country will be back on its old industrial footing."

War Car Buying Condemned

WASHINGTON, March 11—Bitter partisanship marked the final report of the House Select Committee on Expenditures in the War Department, in which the policy pursued by the Secretary of War in the purchase and sale of automotive equipment used by the American Expeditionary Forces is condemned. The committee contends that "our inquiry shows the power wielded by the motor industry, or a part of it at least, through the War Industries Board, was disadvantageous to the interests of the Government in time of war."

Rotary Tire in Receivership

COLUMBUS, March 10—Upon application of eight stockholders, Judge Duncan of the Franklin County Court appointed V. H. Loveless of this city receiver for Rotary Tire & Rubber Co.

BOSTON BLOWS OFF SPRING SALES LID

Show Crowds Block Streets on Opening Day—Rural Dealers Place Orders

BOSTON, MASS., March 14—The lid is off the spring selling season here. The Boston automobile show, always a strong merchandising event, promises this year to outdistance all previous shows in stimulating spring buying.

Evidence of the strong public interest may be found in the fact that the doors of the Mechanics Building, where the show is staged, were thrown open at the request of the police fifteen minutes ahead of schedule to-day to relieve the traffic congestion in front of the show building caused by crowds in the street.

The day's attendance was more than 35,000 which is slightly larger than the 1920 opening day. Exhibitors were impressed particularly by the quality of the first night attendance in which they found a good percentage of prospects. Some sales were reported.

There has been a gradual improvement of business in the Boston territory, particularly in the larger communities, for the past six weeks. Sales in the rural districts have lagged somewhat. The show will bring in the rural dealers some of whom were here for the opening and a big increase in wholesale buying for spring consumption is expected.

The annual automobile round-up, the big "Pep" meeting of the New England automotive trade, will be held Tuesday night with Alfred Reeves, and Harry G. Mook, the principal speakers. The Governor and his staff will be at the show Wednesday. A salon showing several of the higher priced cars will open in the Copley Plaza Hotel, Tuesday.

UTICA DEALERS SHOW HELPS CLEAR USED CARS

UTICA, N. Y., March 10—The Motor Dealers' Association of Utica brought their 1921 show to a successful close on Saturday with an enjoyable banquet held at the City Club.

The committee in charge of the banquet consisted of H. W. Skinner of the Skinner Motor Car Co.; Walter R. Schiller, of the Schiller Electric Garage; W. W. Garabrant of the Franklin Motor Car Co.; G. H. Wells of the Chevrolet Motor Car Co.; Edward Welch of Welch Motor Car Co. and Ernest P. Robischon.

The show this year was held in the individual showrooms of the dealers owing to the lack of a large enough hall. Many sales were effected, in particular, the dealers making deep inroads into their stocks of used cars.

GRAY MOTOR'S CAR READY BY SUMMER

Company Headed by Klingensmith and Beall Prepares for Early Production

DETROIT, March 12—F. L. Klingensmith, former general manager of the Ford Motor Co., set at rest rumors as to his future plans by the announcement that he would associate himself with F. F. Beall, former vice-president in charge of manufacturing of the Packard Motor Car Co., in the production of a new four cylinder car to retail at around \$1,500. Associated with Klingensmith and Beall will be W. A. Blackburn, former factory manager of the Cadillac Motor Car Co., who will occupy the same position with the new concern.

The new company will be known as the Gray Motor Corp. It is a reorganization of the Gray Motor Co., which has a large plant at Mack Avenue and Terminal Railroad where the company for several years has been conducting successfully the manufacture of engines.

Beall joined Gray Motors upon his resignation from Packard last summer and has developed a successful engine. The corporation is well equipped for the manufacture of engines in large quantities for commercial use in addition to its own car requirements. The car to be brought out this summer will have 112 in. wheelbase, 3½x5 engines and unusual body lines. The success of Beall with Packard assures highest grade workmanship on new product. The car will be marketed through ten distributing centers each with an assembly plant and cars will be shipped from Detroit unassembled, reducing sales expense and freight.

At the meeting to-day of directors of the new corporation, Klingensmith was named president; Beall, vice-president and general manager; G. H. Kirchner, president of the First State Bank of Detroit, treasurer, and J. B. Moran, secretary and assistant treasurer. Klingensmith was with the Ford company for fifteen years, the last six as vice-president and treasurer. He resigned Jan. 1.

REGISTRATION of motor vehicles at the Pennsylvania Highway Department shows strikingly the effect of the open winter. More than 100,000 more passenger cars were licensed by the last day of February than at the same time last year. The State has just issued tag No. 401,986 for a passenger car.

Up to Feb. 28 there were 396,320 passenger cars registered, against 283,543 last year and 43,688 trucks, as compared with 32,614; while the registration of motorcycles was 8420, against 4804 on Feb. 28, 1920.

Since that time there has been much speculation as to the future and the announcement of the combination with Beall is pleasing to his friends.

Klingensmith's long experience with Ford in financing and sales, Beall's mechanical and production experience, and the financial backing of men prominent in money circles are believed to assure the development of another large automobile company in Detroit. In a statement to-day, Klingensmith said:

"I consider myself especially fortunate in being able to form a partnership with Beall in view of his training and long experience in quantity production of high grade automobiles. I consider Beall the best qualified man in the automobile industry to-day, from a manufacturing, designing and metallurgical standpoint, to develop a new car." The car will be known as the Gray and equipped as it will be, is expected rapidly to take rank with popular priced cars now in the market.

DURANT TO COMPLETE EXPERIMENTAL CARS

NEW YORK, March 11—W. C. Durant expects to have completed by the last of this month the experimental cars which will be given thorough tests before they are put in production by Durant Motors, Inc. No details regarding them have been made public, but it is understood there will be two models, the lower priced of which will sell at less than \$1000.

While many cities are hoping they will get one of the Durant factories no statement in regard to locations has been made since the decision to locate one in Flint and another on the Pacific coast. Even the Flint site has not been settled upon.

Durant Motors stock is now quoted on the curb market at around 20 and it is understood there will be another issue of 100,000 shares of no par value common at \$20 a share.

Production and distribution personnel are being built up. The latest announcement is that Roland T. Meacham of Cleveland has been appointed Ohio representative.

Kelley Tire to Change Name

NEW HAVEN, CONN., March 11—Directors of the Kelley Tire & Rubber Co. have amended the charter changing the name to the Martin Tire & Rubber Co. The main reason for the change was the fact that the Kelly-Springfield Tire Co. had brought suits because of the similarity in names. It was announced that James Martin, who has been elected president, had purchased 10,000 shares of the Kelley company stock from Edward J. Kelley, president of the old company, and had given an order for \$500,000 worth of tires besides arranging for a credit of \$100,000 to purchase rubber. The company is not yet in production, but it is said work will begin soon in the new plant at West Haven. With the exception of the president, the old officers have been re-elected.

CAMPBELL DECLINES FORD TREASURERSHIP

Will Continue With Canadian Organization — Ford Assumes Active Charge

DETROIT, March 10 — Considerable interest has been aroused in the future of the Ford organization by the fact that W. R. Campbell of the Ford Motor Co. of Canada finally and definitely has refused to become associated with the American organization. Campbell was sent for by Henry Ford soon after the resignation of F. L. Klingensmith as general manager, and it is said Ford offered him the position vacated by Klingensmith. Campbell was reluctant to leave his Canadian post, but Ford urged him so strongly that Campbell remained at the Highland Park plant from the time of the reopening until last week virtually in charge of the organization there.

At present Ford himself is said to be in active charge at Highland Park as well as the River Rouge plant, where tractor production was started two weeks ago. C. E. Sorensen, who has held the title of general manager of Henry Ford & Son, divides his time between River Rouge and Highland Park and virtually is looked upon as general manager of Ford property and the man next in authority to Henry Ford and his son Edsel. The latter, who is president of the Ford Motor Co., is in active charge with his father.

Since the resignation of W. G. Knudsen, E. C. Kanzler has been in charge of production at Highland Park. However, the title of production manager has not been conferred on Kanzler, and Ford recently intimated it was his intention to eliminate titles and co-ordinate the work of the various departments with direct control of the big organization centered in the group of executives headed by himself and including Edsel, Sorensen, E. G. Leibolt, Ford's private secretary; W. A. Ryan, general manager; B. J. Craig, secretary; Fred Diehl, purchasing agent, and Kanzler.

No name has been sent to the banks in Detroit by the Ford Motor Co. as the official signature on Ford checks to take the place of Klingensmith, and no one will offer any information as to the probable selection as treasurer. Talk of financial difficulties besetting Ford suddenly has become stilled as production has resumed.

Law Provides No Penalty

CHARLESTON, W. VA., March 14—Conviction for overloading in violation of the West Virginia law has been dismissed by the Supreme Court of the State because the statute does not provide a penalty. The decision is expected to result in a revision of the present law which prohibits operation of vehicles with load weight of 15 tons or over, or exceeding a weight of 600 lb. per inch width of tire.

DETROIT FINDS NEED FOR OVERFLOW SPACE

**Everett Building, Adjoining
Main Show Site, Taken Over
—Announce Conventions**

DETROIT, March 10—Clamor for display space in the new Morgan and Wright building, where the Detroit Auto Dealers' Association will stage its 1921 exhibition, which quickly exhausted the 150,000 sq. ft. of floor space, caused association officials to announce an overflow exhibition in Everett Bros. building directly opposite. The Everett building rapidly is being filled and one manufacturer already has secured permission to display his car in a hotel lobby.

Several distributors have announced dealer conventions during the week. Owen & Graham, G. M. C. truck distributors in Michigan, will have more than fifty dealers here for a convention, and the Simons Sales Co., distributor of Overland and Willys-Knight products, and Baker Fisk Hugill Co., Dort distributors, also have scheduled conferences to be attended by their dealers throughout Michigan.

Local distributors have schooled their salesmen in the time-payment plan and efforts will be directed toward convincing visitors that any person of standing can own and operate his own automobile without subjecting himself to undue financial strain. Statistics compiled by the association show that 9,330,000 families in America who do not own cars are financially able and the fact that character, capacity and capital are the only three qualifications necessary to become owners will be stressed in the effort to convince the contingent of non-owners attending the show that the automobile is a necessary adjunct to their daily life.

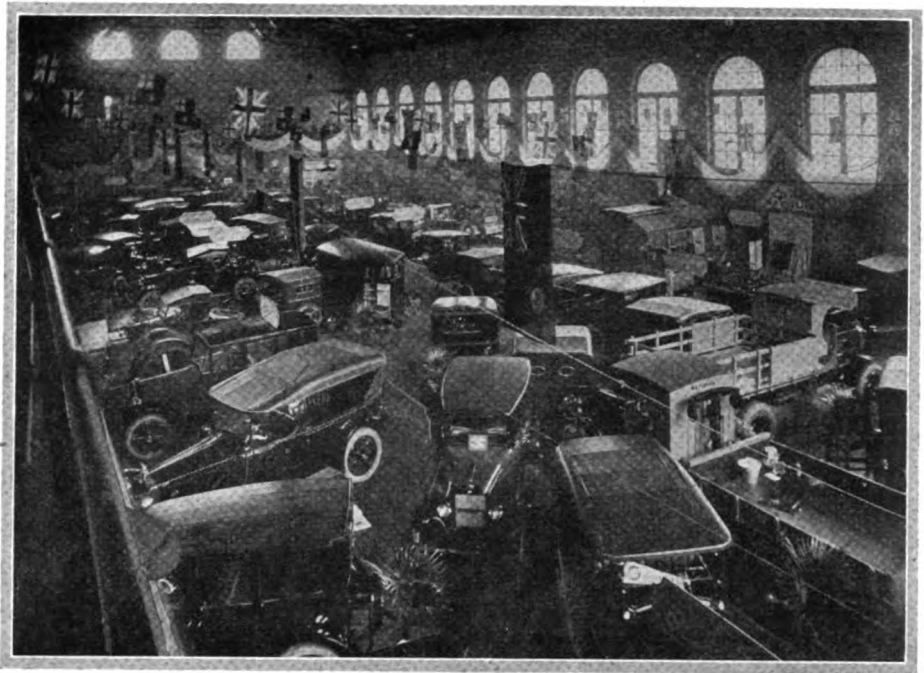
Book Orders for Electrics

SPRINGFIELD, MASS., March 12—Rauch & Lang, Inc., now are settled in their new factory located on a 14-acre tract at Chicopee Falls, Mass. The plant is entirely new and was built and equipped especially for the manufacture of the Rauch & Lang electric automobile. Bodies are being built by the Baker, Rauch & Lang Co. of Cleveland, but the chassis parts are being manufactured almost entirely at Chicopee Falls. The company reports that the number of orders coming in exceeds expectation.

Iowa to Push Car Sales

CEDAR RAPIDS, IOWA, Mar. 10—Lack of sufficient space for full fledged automobile show will result in the practical elimination of trucks and accessories from Cedar Rapids' annual exhibition, which will be held here March 21 to 26. Such was the decision of the members of the Linn County Motor Trades Bureau, who voted to give more space to passenger displays, at the expense of the trucks, tractors and accessories.

Under the arrangement, each exhibitor



Floor of London, Ontario, Show

The London, Ontario, Motor Car Show, the national show for western Ontario, held January 31 to February 5, proved a big sales stimulant for the territory. This shows the pleasing effect procured on the floor shared by both cars and trucks

will be allowed adequate space for three automobiles, as compared with a two-car limit last year. Twenty exhibitors are expected to place about seventy-five cars on the floor. The few trucks and accessories to be shown must be sandwiched in where room can be found for them.

BANKERS WOULD COMBINE ALL WILLYS INTERESTS

NEW YORK, March 12—Bankers' committees for the Willys Corp. and the Willys-Overland Co. are working together to adjust the closely interwoven affairs of the two companies. Considerable progress in this direction already has been made. While the greatest reticence is maintained, it is understood that nine-tenths of the bank creditors already have agreed to an extension of time for the payment of loans. In the case of the Willys Corp. this extension would carry maturities to May 1.

While the banking interests identified with the two companies are by no means identical, it is understood that they are in practical agreement on what should be done. So far as can be learned, their program calls for a consolidation in one corporation of all the interests with which John N. Willys is identified.

A. E. A. to Meet March 30

CHICAGO, March 12—The Automotive Equipment Association has called a meeting of its directors and membership committee to be held at the Congress Hotel, March 30 and 31. The meeting will be equally divided between jobbers and manufacturers. Action will be preliminary to the June meeting at Mackinac Island.

MAY STORE DISPLAYS CLEVELAND PRODUCTS

Annual Exhibit of Made-at-Home Goods Helps Develop Buying Tendency

CLEVELAND, March 11—Cleveland's second annual automobile show of the year was held last week on the third floor of the May Co., one of the large department stores of the city.

It was strictly a made-in-Cleveland exhibit. The cars were all hoisted by block and tackle from an alley in the rear to the third floor of the store and then placed in a long row along the center of the apartment.

The exhibit was not confined to cars alone, but there was to be found everything dear to the motor enthusiast. There were windshield cleaners, road guides, signal devices, all kinds of oil and paints and hundreds of other aids to motoring.

In the display window on the first floor there was a large statue of Moses Cleveland, the founder of the city. He held in his hands eleven reins that led to cards on which were printed the names of the eleven Cleveland-made cars that were on exhibition upstairs. The cars are: The Cleveland, Chandler, Templar, Grant, Ferris, Meritt, Jordan, Stearns, Winton, Peerless and Kurtz Automatic.

The exhibit attracted thousands, not only were prospects turned in many sales were made. Even ex-asserted that it was a profitable. The store management said the display would be held next

CLEVELAND CHANGES ASSOCIATION PLAN

Divorces Organization from Chamber of Commerce to Widen General Activities

CLEVELAND, March 12—A new organization stepped into the limelight in circles of the automobile industry in this city and State, when the Automotive Association, last week, unanimously voted to divorce itself from the Chamber of Commerce and to open its own headquarters in the Hotel Winton.

This step was taken because it was felt that the Association could function with greater freedom by being independent of any connection with any other organization.

Parlor F, on the mezzanine floor of Hotel Winton, will be occupied by the executive of the organization, A. O. Williams. A fine library of books and magazines that pertain to the automobile business will be kept on file. Members are urged to take full advantage of the club or lounge room. There friends may be met, conferences held over business and general trade conditions, and advice be given about movements and developments of interest to the industry.

Started Two Years Ago

The Automotive Association was started nearly two years ago through the influence of the Chamber of Commerce, and it has until recently operated as a department of the parent body. Some few months ago, A. O. Williams, who has been for years in various branches of the automotive industry, was elected secretary-manager of the Association,

and under his leadership its scope was widened and its influence broadened.

The Association members now are centering their activities on protecting and furthering the interests of the industry through legislative enactment. Bills pending in the General Assembly that are regarded as pernicious are to be opposed, and others that are considered beneficial to the industry are to be favored.

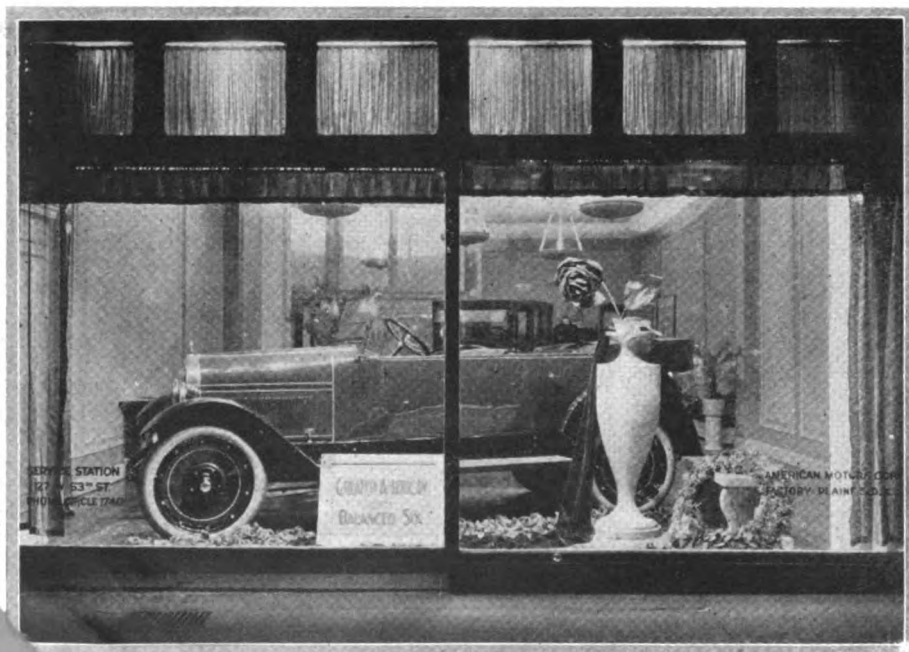
New Car and Truck Models

THIS is a weekly feature of Motor World on page 45 designed to assist its readers in locating information concerning new cars and trucks that are being placed on the market from time to time, and described in Motor World as they appear. Dealers who keep a file of the papers will find this feature a handy reference.

Council Bluffs Stirs Buying

COUNCIL BLUFFS, IOWA, March 10—The second annual Council Bluffs Motor Show far surpassed the initial show in every way. The show was held in the Council Bluffs auditorium, and was attended by 28,000 persons. Directors say the effect of the show upon Iowa trade will be important. One of the principal exhibits, and an innovation in motor shows, was the exhibit of an airplane on an elevated stage in the foremost part of the auditorium. Dealers from all over Iowa attended the show.

An Effective Window Display



A beautiful American Beauty rose in an urn completes the picture in this effective window arranged by E. S. Partridge, branch manager, to show New York American Six at the salesroom of the American Motors Corp. in West Fifty-seventh Street

"MILADY'S CAR WEEK" TONES SPRING SALES

Milwaukee Dealers Try Out New Sales Stimulant and Get Results

MILWAUKEE, March 14—Linking up the motor car industry with the Style Week campaign of dealers in men's and women's wear, thirty of the best known passenger car dealers of Milwaukee during the past week observed "Milady's Car Week" with excellent results in the direction of stimulating trade generally, but more especially in closed cars. The idea was unique in this territory and is believed to be brand new to the American trade. It was designed by the *Milwaukee Sentinel*, one of the leading newspapers, as a counterpart and extension of the Style Week idea. Style Week is an annual event for apparel dealers, having been instituted four years ago.

"Milady's Car Week" was sprung as a complete surprise on Sunday morning with the issuance of a special 12-page supplement by the *Sentinel*. It carried special display advertisements of the thirty dealers who adopted the newspaper's idea of a special co-operative closed car campaign directed at the women of Milwaukee and vicinity at a time when their interest in the new styles of spring and summer apparel was to be attracted and concentrated.

Every day during Style Week, the paper published many columns of advertising by these dealers and contributed a quarter page display about "Milady's Car Week," giving the names of the dealers, as well as a half-column article in the news department treating the dealers' observance of the occasion in an attractive manner.

The dealers linked up their advertising with their respective salesrooms by dressing them up in cut flowers, potted plants, and other decorations suggestive of spring, and putting on display their closed car models, at the same time adding touches of refinement here and there to make the salesrooms especially attractive to women visitors. Reference to the campaign also was made in numerous other ways, notably in connection with the style revues which were staged by several of the largest downtown motion picture theaters.

Independent to Make Truck

YOUNGSTOWN, OHIO, March 12—The Independent Motor Truck Co. announces that it will get into production soon on a 3½-ton vehicle which has passed all tests satisfactorily. The company has been in process of development for three years and now has a capitalization of \$1,000,000. A recent combination has given it control of two truck body factories and it is expected other units will be added in the near future. It is understood that a speed wagon, to sell around \$1,500, will be put out in the spring.

WILMINGTON LOCATES BEST EXHIBIT SITE

Finds Main Street Not Necessary to Stage Big Merchandising Effort

WILMINGTON, DEL., March 11—The annual Wilmington automobile show, which closed on Saturday night after a week's run, is believed to have been the most successful in the history of shows here. Notwithstanding the fact that it was located in a building seven blocks from the main business artery and that an admission of 50 cents was charged, the attendance was upward of 5000. The business outlook, as a result of the show, is very promising, according to dealers who exhibited. They found that the visitors, more than ever before, were really interested in the new things in the motor field. Many prospects were secured and the ground was plowed for many more.

The auditorium in which the show was held gave better opportunity for advantageous display than ever before. By confining the spaces to local dealers it was possible to accommodate all who wanted to be represented. In the line of entertainment, two of the best orchestras in the city were engaged, one playing every afternoon and the other every night. While it is not yet known, it is thought likely that the receipts will pay the expenses.

Up to last year the shows were held in the corridor of the Hotel duPont, which is public and where no admission could be charged. Last year, however, on the completion of the new ballroom at the hotel, that, together with a large foyer, was used for the show and admission was charged. The location had an advantage over the one this year, but in all other respects the auditorium was the best showplace and is expected to give the best results. The show has already stimulated the business here.

WEST VIRGINIA DEALERS HOLD FIRST CONVENTION

CHARLESTON, W. VA., March 10—Seventy-five dealers from all parts of the state attended the first annual convention of the West Virginia Automobile Association. President J. W. Reitz, of Elkins, organizer of the State association, reviewed incidents leading to the formation of the association and spoke of the need for co-operation in business.

Secretary Hager, of the Charleston Automobile Club, welcomed the visitors on behalf of the club, city and local dealers. He bespoke greater co-operative effort, with "no nagging, no pulling, no jealousy, no lack of harmony."

The convention gave considerable attention to the good roads bill, mechanics' lien bill and several other pending legislative measures. Harry G. Moock, general manager of the National Automobile Dealers Association, spoke on trade conditions.

CAR FOR EV'RY PASTOR URGED BY M. E. PAPER

CHICAGO, March 11—"Every pastor should have a car," is the assertion made in an editorial printed by the *Northwestern Christian Advocate*, one of the official papers of the Methodist Episcopal Church.

"The minister's efficiency is doubled, trebled and even quadrupled by the use of the 4-wheeled chariot of the Apocalypse," says Dr. E. Robb Zaring, the editor. "He can visit sections where shoes, horse or human could not penetrate. Every pastor should have a car, every rural pastor, particularly. The people that the rural pastor serves probably have theirs. Pass prosperity to the parson."

TRUCK SALES BRIGHTEN IN OHIO TERRITORY

COLUMBUS, March 12—Prospects for an active demand for motor trucks within a short time are very bright in Columbus and central Ohio territory, according to leading agencies. During the past few months it has been rather quiet and a canvass of the situation shows that many truck users will soon come into the market for replacement of their truck equipment.

Leading truck dealers report a larger number of inquiries from delivery companies, mercantile concerns and all lines of business. Some of these inquiries have developed into orders, while others are being held up for a time. With the opening of spring a good, steady demand for trucks of all sizes is anticipated and preparations have been made accordingly.

Banking interests are much more lenient toward truck agents than formerly, and now all are being financed to the extent that is needed. It is recognized by bankers that motor trucks are a necessary complement of the business world and that it would be unwise to refuse to furnish money when needed. As a result dealers have been able to secure sufficient stocks for demonstration and show purposes and can promise prompt deliveries on all orders.

THE first automobile show to be staged in East St. Louis will be held March 16 to 19 in the show rooms of the Callahan Motor Co., Dodge distributors. Every automobile, tire and accessory dealer is full of enthusiasm and is doing everything he can to make the show a success. Among the accessories to be displayed will be a number manufactured in this city. Paul V. Tissier, president of the East St. Louis Automobile Dealers' Association, is in charge of the show.

MOOCK STUDIES PLAN FOR CAR CHAUTAUQUA

Will Seek Manufacturers' Support of Move to Promote Modern Business Methods

ST. LOUIS, March 12—A motor vehicle Chautauqua to educate small town dealers in all phases of their business, has been proposed by Harry G. Moock, general manager of the National Automobile Dealers Association, and he is now getting the ideas of leaders in the industry on the subject as well as gathering data which would be of value in putting his plan into effect.

It is Moock's idea that there are thousands of dealers in the smaller towns who never have had an opportunity to learn the most modern methods of conducting their business, such as cost systems and the latest ideas in salesmanship. He proposes to hold sessions of the Chautauqua at the principal distributing centers and make the sessions available to all dealers upon the payment of a nominal fee which would insure their interest in the courses provided.

If the plan is put over, a faculty of experts in all branches will be provided for the traveling university. They would be qualified to teach service, accounting and selling. Their lessons would bring out the most advanced ideas in all branches of the business, and it is believed dealers would get knowledge and ideas which would prove invaluable to them.

No definite plan has been worked out for financing the project, but it is believed the manufacturers would be sufficiently interested to help defray the expenses. The returns they would receive from the increased selling ability of their dealers, it is believed, would recompense them many times for any expenditure they might make in this direction.

SACRAMENTO BUSINESS UP TO PRE-WAR VOLUME

SACRAMENTO, CAL., March 12—Orders are not piled on the desks of sales managers of local automobile agents and distributors here, but the business has revived to the pre-war volume and sales are going ahead. In the last two weeks there has been a very decided strengthening of the motor car market throughout northern California. Dealers and distributors alike report the sale good, with indications of better times ahead.

There is a healthy competition stimulating the trade. Buyers are showing discrimination and an indication that they know what they want. Dealers are urging their salesmen to greater efforts and those who broke into the automobile business when it was just a question of sitting still and getting orders are readjusting themselves to new conditions.

The Sacramento Motor Car Dealers' Association is preparing for a year of intensive selling.

TRY OUT NEW RATES TO CHECK COLLISIONS

Aetna Company to Hold Insured for First Loss—Seek Wide Co-operation

NEW YORK, March 14—An important step toward reducing the number of automobile accidents and toward lessening insurance collision rates, has been taken by the Aetna Life Insurance Co. and its affiliated companies, the Aetna Casualty & Surety Co. and the Automobile Insurance Co. of Hartford, in eliminating the sale of full coverage collision insurance dating from March 9. Under the new plan only that form of collision insurance which provides for the insured paying the first \$50 or \$100 of each collision loss will be sold.

This action has been taken individually by the companies and is designed to throw the burden of careless and negligent motor car operation upon the operator. Insurance brokers and agents have been notified of the company's action and the reasons for it. Their support has been particularly sought in a movement to eliminate full collision coverage insurance in the Greater New York zone because of the heavy traffic.

By making this change company officials expect to accomplish something more effective and constructive in the way of reducing preventable insurance accidents than the mere action of increasing rates. Decreased losses will be reflected in decreased rates so that the main benefit will be to the public.

As part of the Aetna's present move to reduce preventable losses, the company is also advocating the equipping of cars with approved types of locks to lessen the danger of theft.

MAXWELL DEFENDS PLAN TO MERGE INTERESTS

WILMINGTON, DEL., March 11—An answer has been filed in the United States District Court to the suit of Charles J. True by Maxwell Motor Co., Inc., through Carl Tucker, vice-president. He claims numerous errors in the bill of complaint. Special stress is laid upon the fact that the book value of the stock of the defendant corporation, stated at \$22,117,230.80 as of Dec. 2, 1920, is liable to deductions for reserves for depreciation, contingent liabilities aggregating \$4,513,265.80.

Taking exception to the alleged value of the aggregate tangible assets of the Chalmers Motor Corp., these are asserted to have had the value, on Dec. 2, 1920, of \$4,519,722.57, and not \$435,014.02, as alleged in the complaint.

It is denied that the equities in the defendant's property are sufficient to provide for the full value of the plaintiff's stock and that of other first preferred creditors in case the property of the defendant is liquidated.

The dismissal of the bill is asked.

IOWA TO PAY FEES ON QUARTERLY BASIS

DES MOINES, March 11—The Iowa Motor Trades Bureau has won the first lap in its legislative program. The Senate of the Iowa Legislature this week passed the Whitmore bill, fathered by the bureau, which changes the methods of paying motor license fees.

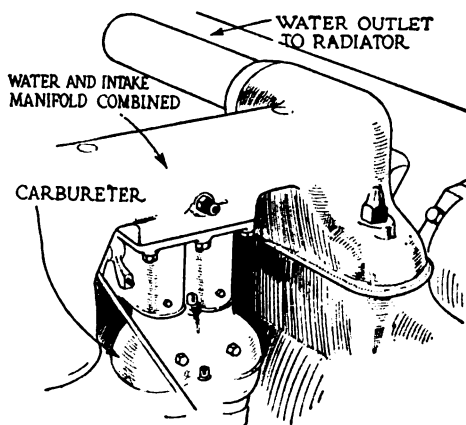
According to the new law, fees will be paid quarterly instead of once a year, and cars purchased in April, May or June will pay only three-fourths of the annual fee. Cars registered in July, August or September will pay half the annual fee and cars purchased in October or November will pay one-fourth. Cars registered in December will not be required to pay a fee for that month, but must take out a license for the next year.

THE NEW WILLS-SAINTE CLAIRE

(Continued from page 29)

lever is placed in reverse. This white light gives enough light to show the driver the road for a considerable distance to the rear and also to the side of the car. There is another lamp permanently fixed to the front of the dash over the engine and this lights up the whole power plant.

The headlamps, instead of being fitted with two sets of bulbs, have tilting reflectors which oscillate through an arc of 5 deg. The movement is magnetically controlled and the operation is by means of a ring just under the horn button on top of the steering wheel.



The intake manifold and water outlets are combined to take advantage of the heating effect of the water

Protection from theft is well cared for and tumbler locks are provided on the gearset lever, large tool compartment under driver's seat, tool pocket in the front door and the spare wheel on the rear. One key fits all of these locks so that there is a minimum of trouble.

The equipment supplied with the car is unusually complete.

INDUSTRY MUST URGE HIGHWAY NECESSITY

Would Benefit Every Line of Business, Charleston Association Is Told

SPARTANBURG, S. C., March 11—Declaring the close association the good roads movement has to the sales of motor cars makes it necessary that the automotive industry and every man in it to sell the idea of good roads to the United States, to the State of South Carolina and to the county in which he lives, T. Wilbur Thornhill of the Charleston Oil Co. urged the members of the Charleston Automotive Trades Association to sign their correspondence "Yours for good roads."

"If South Carolina had good roads now," said Thornhill, "instead of being more backward in good roads than any other State in the Union, they would reduce the cost of transportation, supplement the railroads and cut the cost of living. City congestion would be lessened, there would be less waste of farm products and motor touring would be stimulated. Every line of business would be enormously benefited by good roads," he declared.

J. B. Friday, sales manager of the Palmetto Garage, spoke on the benefit to be derived from an automobile show, which he suggested might be held in Charleston the early part of April. As Mr. Friday had recently moved from Columbia, where he saw Columbia's last shows he was able to give detailed information on the subject. W. T. Smith, secretary of the Charleston Automotive Trades Association, was directed to interview the entire membership on the matter and find out the views as to holding an automobile show in April.

T. F. Roberts, second vice-president of the Association, spoke on the subject of establishing a used-car exchange, where all second-hand cars could be appraised and sold.

J. Robertson Paul, president of the Charleston Automotive Trades Association, told of his visit to Charlotte, N. C., where he attended the meetings of the Charlotte Automotive Trades Association, of the fine welcome he received, and of how impressed they were with the work being done in Charleston.

Seek Views on Garage Bills

NEW YORK, March 11—A questionnaire asking for the views of factory service managers on bills pending in nine State legislatures which would provide for the examining and licensing of garages and repair shops has been sent out by the service committee of the National Automobile Chamber of Commerce at the request of the legislative committee. The States in which such legislation is pending are Arizona, Colorado, Connecticut, Idaho, Illinois, Minnesota, Nebraska, North Dakota, and Texas.

PARTS SERVICE CUTS PROFITS OF DEALERS

Truck Manufacturers Seek Means to Prevent Competition in Repair Business

CHICAGO, March 12—Representatives of the Motor Truck Manufacturers Association and parts and unit makers met at an all-day session at the Hotel La Salle here to discuss the question of service and distributing stations which the manufacturers of parts and units have been establishing throughout the country and which, it is felt, will affect more and more as time goes by the business of the truck dealer.

The discussion brought no tangible results though it indicated that there is very little disposition on the part of the parts and unit makers to relinquish the ground they have already gained or to stop from continuing to establish stations with the ultimate view of twelve hour service. It is expected that they will adopt a program of future procedure in the matter of opening up new territory and will submit it to the truck manufacturers for suggestions.

Individual service and distributing stations for parts and units were started by the makers several years ago, but not until recently has the expansion been so great as to cause the truck manufacturers to take action. Now there is a determined move on the part of the manufacturers to do something that will meet the situation.

There are indications that in cities where one part is being handled by a parts maker distributor, this same distributor will take on the product of some other parts maker, thus doing away with a multiplicity of parts station in any one community. The expansion of such stations necessarily will affect the regular truck station handling service, for where a part can be purchased from a parts station direct service will be done either at that station or at a repair shop nearby.

Such a condition will mean that the truck dealer or distributor service station will find its profits from the service end of his business considerably curtailed unless some arrangement can be effected whereby as complete a stock of parts can be carried as that carried by the parts distributor, and that the dealer or distributor of trucks will find his sole business to be in selling trucks. It has been suggested, as one way out of the difficulty, that in large cities several truck manufacturers whose products are similarly equipped in many respects unite in a common service station.

Firestone Sales \$6,000,000

AKRON, OHIO, March 11—Directors of the Firestone Tire & Rubber Co. have passed the common stock dividend due March 20, but have declared the regular quarterly dividends on the 6 and 7 per cent preferred stock. They also set aside a sum to pay employees \$1.50 a share on stock held under the employees' stock



Effective Display at Trenton Show

Plenty of "breathing space" between vehicles made the Trenton, N. J., show a particularly good looking exhibit and afforded the exhibitors the opportunity to display their models advantageously. The show is proving a big sales stimulant

plan. It is estimated that sales this month will exceed \$6,000,000. The company is putting on men and are working two eight-hour shifts, five days a week. The surplus of the company is \$33,000,000 with \$7,500,000 in cash.

POCKET VETO KILLS TRUCK DUMPING BILL

WASHINGTON, March 11—President Wilson's pocket veto of the Army appropriation bill puts an end to pending legislation designed to sell or transfer surplus army trucks and automobiles. The Senate and House had passed the bill as received from conference in which the House conferees had prevailed upon the Senate managers to an amendment requiring the sale of not less than one-half the surplus trucks and cars.

The Senate amendments concerning the disposition of tractors as carried in the Fortifications bill were accepted by the House and the measure received the approval of the President before his retirement from office. Under the terms of this bill, the War Department is authorized and directed to transfer 1250 tractors to the Bureau of Good Roads.

Slough Trucks Go Dead

LOS ANGELES, March 12—Indications are that the sale of American army trucks reimported into this country from England by the Slough Trading Co. have undergone a bad slump. When the sales began the representative here of the British company did a good business but trade soon fell off and more than half the consignment of 75 is still on hand.

TRENTON SHOW WAKENS INTEREST OF PUBLIC

TRENTON, March 10—An appreciable awakening of public interest in automotive products was demonstrated at the sixth annual Trenton automobile show held here in February.

Although actual show sales did not exceed 25 per cent of those of last year, the dealers are greatly encouraged by the promise of a good spring demand shown in the large attendance and the exceptionally fine class of prospects secured.

On the whole the show is regarded as the most successful ever held by the Trenton Automobile Trades Association. The cars and trucks shared the main floor of the Trenton armory. There were 34 exhibitors representing 45 makes of cars and trucks. The exhibits consisted of 165 models including 125 passenger cars and 40 trucks. Accessories were shown in the balcony. In this group there were 18 exhibitors, and considering the fact that this is the first time they have been in the show in several years, the automobile dealers regarded it as a mighty fine omen.

No Crowding of Exhibits

The decorative effect was simple and pretty and particularly pleasing because of the fact that the cars were not crowded in the exhibits, enabling them to be shown to good advantage. The show was aggressively advertised throughout the territory through newspaper space and posters.

Industrial conditions in Trenton have been slowed down but are now improving.

ASSOCIATION ACTIVITIES

New York Committees Named

NEW YORK, March 12—Appointments of committee chairmen of the Automobile Dealers Association, Inc., to act during the ensuing year, have been made as follows: Passenger cars, Harry Stratton; truck, W. O. Crabtree; building, Lee Eastman; house, E. S. Partridge; membership, I. C. Jones; finance, Albert Hirst; legislative, Glenn Tisdale; exhibition, A. G. Southworth; traffic, Frank Carrie; publicity, E. S. Partridge. The executive committee of the association is composed of Lee Eastman, Harry Stratton and I. C. Jones.

Dealers Discuss Contract

MACON, GA., March 10—Dealers' contracts and franchises under which they sell automobiles and motor trucks comprised one of the principal subjects discussed at a meeting of automobile dealers from twenty Georgia counties held here Tuesday. An open discussion relative to plans and methods of selling used motor cars was also an important feature of the meeting, the dealers of the various towns exchanging their ideas on that subject, and telling of successful campaigns they have held. A. S. Hatcher, vice-president of the Georgia Automotive Dealers Association, and W. T. Watters, president of the Macon association, arranged the meeting here. It was held under the auspices of the State organization.

Woodford Dealers Organize

ROANOKE, ILL., March 10—Dealers of Woodford County have formed the Woodford County Automotive Trade Association and will be affiliated with the Illinois Automotive Trade Association and the National Automobile Dealers Association. Officers elected were: J. R. Gray, president; T. E. Boyd, first vice-president; H. Waldschmidt, second vice-president; B. Goodwin, third vice-president; D. C. Diers, treasurer; F. J. Darnell, secretary, and V. F. Bower, director at large.

The value of a cash basis in business was outlined by R. M. Morgan of Peoria and this proved one of the main arguments in deciding the local men in the formation of their organization. F. C. Zillman, manager of the Illinois Automotive Trade Association, also spoke.

Pipes Spoil Only Show Site

PARKERSBURG, W. VA., March 11—The Parkersburg Automobile Dealers' Association has decided to abandon the proposed 1921 show because of the lack of a suitable building.

The show last spring was held in the Tabernacle building, but the dealers on investigating the building have found that it will be in no condition for such an affair this season. Part of it has been used for the purpose of manufacturing concrete sewer pipe and other

parts are filled with cement and paving machinery.

Even if the building is cleared of the cement and machinery it will be in no condition for an automobile show, it was decided, and as no other building of suitable size is available all plans for holding the show were dropped.

Dealers Extend Membership

CHARLESTON, W. VA., March 10—The West Virginia Automobile Dealers Association at its first annual convention, held here, decided to open its membership to the entire trade, including jobbers, garage men and tire dealers. This action was taken at the suggestion of Harry G. Moock, general manager of the National Automobile Dealers Association, who was the guest of honor at the convention. The membership hitherto has been confined almost exclusively to passenger car dealers. J. W. Reitz of Elkins, president of the association, presided over the sessions.

The association appointed a good roads committee headed by Charles Middleburg, a member of the State legislature and a prominent Hudson-Essex dealer.

Tie Up With Retail Merchants

OTTAWA, ONT., March 11—An automobile section of the Ottawa Retail Merchants Association has been formed in the city with W. H. McIntyre of the Ottawa Car Mfg. Co., Ltd., as president; J. R. Dixon, first vice-president; J. G. McGuire, second vice-president; S. C. Cooke, secretary, and A. G. Greenfield, Ottawa manager for the Imperial Oil Co., Ltd., treasurer.

This organization succeeds the Automotive Association which was doing good service, but the dealers decided that better work would be accomplished in co-operation with the retail merchants as a section of their association.

Selling Trucks, Trailers and Transportation

(Continued from page 11)

feel that an earnest effort is being made to please him and get his business. The prospect also is more apt to feel that he will surely get a square deal.

The Salesman's Report is a stiff manila card to be filled out with accurate useful information about the prospect and his business, for instance: Prospect's name, address, telephone number; number of trucks in operation; "Can you sell this prospect?" "Why you could not close," if such was the case; date of next call; salesman's name; buyer's name; prospect's business; type of trailer (or truck) in which he is interested; price quoted and date deliv-

ery is to be made. Then, at the bottom of the card is the "tickler," or return-call information—a convenient means of keeping a line on live prospects. There are spaces for indicating the results of three calls. Remarks may be made here and on the back of the card, that will assist in the sale. Dates when letters are sent out are marked on the top margin of the card. The cards are filed away by city, if out in the territory; that is, if the prospect is not located in Philadelphia. This is called the territorial file. This method applies to dealer, as well as direct consumer prospects.

When a sale is made, the company, if the vehicle sold is a truck, takes a record of the motor number, among the other data, and if it is a trailer, it will include the type and use to which it is to be put.

In due time the company requests a letter from the user of the vehicle as to the satisfaction it is giving, and also a photograph of it in action. This, asserts Kauffman, has proved a wonderful stimulus in getting other prospects.

The company never loses contact with an owner and keeps after the factory to keep in touch with him also. "Once a prospect, always a prospect."

In the case of a truck sale, the company requests that the owner will have it brought to the service station every thirty days, for free inspection. This request is made not only verbally, at the time of the closing of the sale, but later, by return post card. If the owner fails to bring in or send in his truck, a call is made upon him to learn why he has not taken advantage of the offer.

Iowa Dealers to Organize

VINTON, IOWA, March 12—Automobile and accessory dealers of Benton County, at a meeting here a few days ago, voted organization and affiliation with the Iowa Motor Trades Bureau. H. E. Wells of Vinton, who was instrumental in forming the bureau, was named president of the organization, with W. S. Malcolm of Belle Blaine as vice-president. W. P. Kearns of Vinton was elected secretary-treasurer.

U. S. Truck Guarantees Price

CINCINNATI, March 11—The United States Motor Truck Co. has guaranteed its prices against decrease until July 1. This announcement was contained in a letter addressed to all distributors, dealers and salesmen. The announced purpose of the company is to do its share in stabilizing the automotive industry.

Convention to Attend Show

PEORIA, ILL., March 11—A hundred cars of the latest models and more than thirty accessory dealers will have exhibits at the 1921 Automobile and Accessory Show in the new National Warehouse during the week of March 21-26. Dealers are working under a handicap to arrange this show.

Automobile men from all over the State will be in Peoria that week attending the second annual State convention of dealers and will be guests of local automobile men at the show.

CHANGES IN THE TRADE

Brocar-Haywood Co., Louisville, has been appointed distributor for the Oldsmobile in this territory.

C. E. Fay-Allen Co., Boston, are to be the New England distributors for the new Wills-Sainte Claire.

Clucker & Hixson Co., New York, will open a Chicago office in the Martin Building under the management of Albert J. Ludy.

Charles B. Vogt has been appointed Philadelphia branch manager of the United States Tire Co., succeeding J. E. Given, who has resigned.

E. J. Herrmann has been appointed sales manager of the Indianapolis territory for the Martin-Parry Corp. of York, Pa., and Indianapolis.

Stearns Sales Agency, Milwaukee, Wis., distributor of the Stearns, has been appointed representative in the same territory of the Rolls-Royce.

Consolidated Motors Co., Louisville, recently organized, has been appointed distributor for the Pilot car for Kentucky and southern Indiana.

Croner Motorcar Co. has been organized in Baltimore to distribute the Sheridan. Louis Croner is president of the company and H. M. Ambach sales manager.

J. Harry Schumacker, of J. Harry Schumacker & Co., Philadelphia, Dorris distributor, has sold his interest in the firm to his partner, James Bromley.

H. I. Bunting, Cedar Rapids, Iowa, has purchased an interest in the Cedar Rapids Velle Co. and is back in automobile row after an absence of several months.

Ogren Motor Car Co., Milwaukee, manufacturer of the Ogren, has opened a distributing branch, sales, display and service station in Milwaukee. Fred L. Good is sales manager.

Sweeney & Thompson, Boston, have been appointed representatives for the Elgin car. R. E. Libby, manager of the new firm, was formerly connected with the Elgin company.

L. F. Joliat has been made manager of the Detroit branch of the Miller Rubber Co. Joliat comes to Detroit from Cleveland, where he was with the Goodrich organization.

B. Moss McKenzie has resigned as general purchasing agent of the Ford Motor Co. of Canada. He has not announced the reason for his retirement nor his plans for the future.

F. W. Schulz, formerly sales manager of the West Side Elgin Co. of Milwaukee, has opened offices for the distribution of the Elgin in Dane, Columbia, Sauk and Iowa counties.

W. A. Murfey, sales promotion manager of the Standard Motor Truck Co., will handle sales and service direct from the factory. A large building at the factory has been set apart to house this department.

Hatch Motors Co., Philadelphia, has opened a sales and service branch at 51-53 East Broad Street, Bethlehem, Pa., under the management of F. L. Berger, who has been the Philadelphia service manager.

Milwaukee Oldsmobile Sales Co. has been organized in Milwaukee to distribute the Oldsmobile line in Milwaukee County. C. L. Goersch is president; A. G. Steinbach, vice-president, and E. F. Berry, secretary and treasurer.

Charles O'Harrow, identified with the automotive industry in Waterloo, Iowa, for many

years, became associated with the A. L. Alexander Co. March 1, as director of sales. The Alexander company handles Liberty and Chevrolet.

Wills-Sainte Claire Co. of Illinois has been appointed Chicago representative of the Marysville company. Dayton Keith is president and E. J. Rudel is working with him. Both were associated with the Ford organization in the past.

Robert S. Wilson, who has been manager of the truck tire department of the Goodyear Tire & Rubber Co., has been promoted to the position of manager of the Western division with headquarters in Chicago. His territory will cover ten States.

Karl W. Volk, of Cleveland, has been appointed manager of the Stewart Products Service station here. He has been with the company in Cleveland for two years, and before that time was with the Peerless factory for seven years.

Owen & Graham Co., of Detroit, distributors for General Motor Trucks, will build a new agency here in automobile row, to be completed by Oct. 1. This city will be made the headquarters for distribution in 12 counties of northern Ohio and southern Michigan.

Hephner-Daul Motor Co., Eau Claire, Wis., has been organized to act as distributor of the H C S in western Wisconsin. G. J. Hephner, president and general manager, will have headquarters at LaCrosse, Wis., and J. M. Daul, secretary and treasurer, at Eau Claire.

W. R. Campbell, who has been acting temporarily as treasurer of the Ford Motor Co., has definitely decided not to serve permanently in that capacity and it is understood he will return to the Canadian plant, of which he has been in charge for some time.

Clyde Masters, identified with the sales end of the automobile industry in Omaha for the past four years, has been appointed sales manager for the Omaha Auto Sales Co. Masters was associated with the Guy W. Smith Co. and the Western Motor Co. for several years.

W. F. Traves, head of the Talbott Reel Mfg. Co. and an official of the American Knockdown Bottle Case Co., both of Kansas City, is in St. Louis to take over the interests in the Skelton Motors Corp., which he purchased from Dr. L. S. Skelton shortly before the latter's death.

R. H. Johnston, who has been vice-president of the White Motor Car Co. with headquarters in Washington, has resigned to enter the investment banking business in New York. He formerly was manager of the White branch in New York and president of the New York Dealers Association.

R. D. Catherwood, for five years general sales manager of the Van Brunt Automobile Co., Omaha, and Chester Mattson, retail sales manager for the same company, have resigned their positions and have organized the Catherwood-Mattson Motor Co. to distribute Velle automobiles in Nebraska and southwestern Iowa.

George E. Smith, sales manager for the Simons Sales Co., Michigan distributor of

Willys-Overland cars, has resigned and is considering two propositions in connection with the merchandising of high grade cars in Detroit. Smith resigned as sales manager of Willys-Overland, Inc., in New York, to join the Simons organization.

Lincoln T. Kauffmann Co. has been organized to act as selling representative for manufacturers of automotive equipment by Lincoln T. Kauffmann, formerly president of the Auto Leather Mfg. Co., of Arlington, N. J., and Lewis M. Schwartz, who for 10 years was advertising and sales manager for the Emil Grossman Mfg. Corp., Brooklyn.

Keystone Motors Co. has secured the franchise covering the distribution of Franklin cars in Louisville territory. The company will also continue to distribute Briscoe cars. George Younger, who has handled the Franklin in this territory for the past twelve years, will be connected with the Keystone company as manager of Franklin retail sales.

Robert E. Page, who recently has been engaged in field organization work for the Hawkeye Truck Co. and the Nelson Motor Truck Co. and who formerly was in the foreign sales organization of Dodge Bros., has been appointed general sales manager of the O'Connell Motor Truck Co. of Chicago. He will undertake at once the building up of a national sales organization for this company.

Miller Rubber Co. has opened an Omaha factory branch with A. G. Wall as manager. The Omaha depot until recently has been operated under the direction of the Denver office. Wall has been associated with different rubber companies in Omaha for a number of years, and will be a valuable addition to the Miller company. Mr. Wall has spent the past several days traveling over the Omaha territory and reports that the tire business shows a substantial increase in this territory.

R. W. Schuette, for many years Rolls-Royce distributor for the United States and of late New York branch manager, has resigned and will take an extended trip through Europe. He will be succeeded in New York by J. S. [Name obscured by stamp] New York Locomobile branch. Richard Travers, for the past seven years Arrow salesman, Chicago, has joined the Chicago branch of Rolls-Royce. J. Roy Hiltz has resigned from Hares Motors of New England to do special sales work for Rolls-Royce.

AUTOMOBILE dealers from Floyd, Chickasaw and Mitchell counties, Iowa, gave a dinner to Senator Scott and Representative Dodd at the Hildreth Hotel, Charles City. Senator Scott is chairman of the motor vehicle committee of the Iowa Senate. After the dinner Senator Scott explained many of the bills that are now before the Senate in reference to motor vehicles.

The meeting was considered very beneficial to both the automobile dealers and to the Senator. During the evening a general discussion was held in regard to road laws and motor vehicles.

COMING EVENTS

SHOWS

Wilkes-Barre, Pa.....March 21-26....Truck Show, Automobile Dealers' Ass'n of Wilkes-Barre, Inc.

DetroitMarch 19-26....Annual Automobile Show, Detroit Automobile Dealers' Ass'n, Morgan-Wright Building.

Torrington, Conn.....March 20-26....Annual Automobile Show, Armory, J. J. Callahan, Mgr.

Deadwood, S. D.....March 21-26....Annual Automobile Show, Deadwood Business Men's Ass'n, Auditorium.

Cedar Rapids, Iowa....March 21-26....Annual Automobile Show, Linn County Motor Trades Bureau, Auditorium, E. L. McKibben.

Fort Worth, Texas.....March 21-26....Annual Automobile Show, Fort Worth Automobile Trade Ass'n, First Baptist Church Auditorium, A. T. Lowry, Mgr.

Norfolk, Va.....March 21-26....Annual Automobile Show, Norfolk Automobile Dealers', Monticello Hotel, J. W. Gates, director.

Oneonta, N. Y.....March 21-26....Annual Automobile Show, State Armory, J. J. Callahan, Mgr.

Ottumwa, Iowa.....March 23-26....Annual Automobile Show, Wapello County Motor Trades Bureau, Davis Bldg., F. T. Lynch, Mgr.

Columbia, S. C.....Mar. 28-Apr. 2....Annual Automobile Show, Columbia Ass'n, J. M. J. M.

Greenfield, Mass.....Mar. 28-Apr. 2....Annual Automobile Show, Greenfield Armory.

New Britain, Conn.....Mar. 30-Apr. 2....Annual Automobile Show, Armory.

Bridgeton, N. J.....April 2-9.....Annual Automobile Show, Bridgeton Automotive Ass'n.

DenverApril 3-9.....Annual Automobile Show, Auditorium.

Gloversville, N. Y.....April 4-9.....Annual Automobile Show, Armory, J. J. Callahan, Mgr.

SeattleApril 4-9.....Annual Automobile Show, Motor Car Dealers' Ass'n, Arena-Hippodrome, W. J. Coyle, Mgr.

Norfolk, Neb.....April 7-9.....Annual Automobile Show, Automotive Trade Ass'n of the Norfolk Commercial Club.

Charlotte, N. C.....April 11-16....Annual Automobile Show, Charlotte Automotive Trade Ass'n, W. M. Jones, Sec'y.

Oklahoma City, Okla....April 11-16....Annual Automobile Show, Oklahoma Motor Car Dealers' Ass'n.

Red Bank, N. J.....April 16-23....Annual Automobile Show, Monmouth County Automobile Dealers' Ass'n, Armory.

Goldsboro, N. C.....April 20-23....Automobile and Industrial Exhibit, Goldsboro Automotive Trade Ass'n, W. C. Denmark, Mgr.

Mexico City, Mexico....Apr. 20-May 5..Mexico City Show, National Theatre Building.

RACES

June 18.....Speedway Events.

Labor Day.....Autumn Classic.

July 24.....Grand Prix.

MILLER DIVIDEND HELD TO PAY OFF DEFICIT

AKRON, March 11—For the first time in its history the Miller Rubber Co. has passed a dividend, according to the company's statement March 1. The directors deferred action on the 2 per cent quarterly dividend on preferred stock, and this because the company figures on charging off the loss caused by lowered prices of raw materials on hand or contracted for.

"The shrinkage of inventory aggregated \$3,193,086," stated President Pfeiffer, "and payments made in settlement of contracts amounted to \$215,951, or an aggregate amount of \$3,409,037. This action resulted in a net loss for the year of \$617,878.78. Net profit prior

to the charging off of the times referred to amounted to \$2,791,158, practically all earned in the first six months of the year." The statement said the Miller's current assets were in excess of \$14,000,000 and its total current liabilities \$8,676,000.

Surplus tire stocks are rapidly decreasing at the factory.

TO make possible more efficient and economical operation of cars by nonprofessional drivers and to assist new owners to pass the State examination for licenses, a gasoline automobile class is now forming in Boston, under the State division of university extension.

NERA CAR PRODUCTION TO START IN SPRING

SYRACUSE, March 10—Manufacture of the Nera car—the new product of the Nera Car Corp., recently formed in this city—will commence within a few weeks when the company takes possession of a building with 28,000 ft. of space.

Details as to the nature of the vehicle to be marketed are withheld for the present. "We are waiting until we have some finished models on the street before we tell the world much about what we have to offer," said President J. Allen Smith.

It is generally understood that the new vehicle will be a two or three wheeled machine, so constructed that it can be operated with comfort by man or woman.

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Allis-Chalm.	6-12		2	LeR.	4-3½x4½	Gas.	1-2	G-O.....G	14-28	1485	4	Wauk.	4-4½x5½	GorK	3	Port Huron..A	12-25	1700	4	Chief	4-4½x6	G,K	3	
Allis-Chalm.	18-30		4	Own	4-4½x6½	G,K	4	Grain Belt	18-36	2500	4	Wauk.	4-4½x6½	GorK	4	Post.....D	12-20		4	Wauk.	4-4½x5½	GorK	2	
Allwork.....2-G	14-28		4	Own	4-4½x6	GorK	3	Gray.....1920	18-36		3	Wauk.	4-4½x6½	Gas.	4	Prairie Dog..L	9-18		3	Wauk.	4-3½x5½	Gas.	2	
Allwork.....C	14-28		4	Own	4-5 x6	GorK	3	Ground Hog	19-31	2800	4	Erd.	4-4 x6	GorK	3	Prairie Dog..D	15-30		4	Wauk.	4-4½x6½	Gas.	3	
AndrewsKin.D	18-36	\$2500	4	Clim.	4-5 x6½	GorK	4	Gt. Western St	20-30	1950	4	Beav.	4½x6	K.	4									
Ano.....A	3-5		4	Own	1-4½x5½	Gas.	2-3	Hart-Parr...30	15-30	1595	4	Own	2-6½x7	K,D	3	Ranger Cul..A	8-16	1250	4	LeR.	4-3½x4½	Gas.	1	
Appleton.....	12-20	1500	4	Buda	4-4½x5½	G,K	2-3	Heider.....D	9-16		4	Wauk.	4-4½x5½	G,K	2	Reed.....	15-30	2185	4	Dom	4-4½x6	K.	3-4	
Aultman-T.....	15-30		4	Clim.	4-5 x6½	G,K	4	Heider.....C	12-20		4	Wauk.	4-4½x6½	G,K	3	Reliable.....	10-20	985	4	Own	2-6 x7	Ker.	2	
Aultman-T.....	22-45		4	Own	4-5½x6½	G,K	6	Heider.....Cult	6-10		4	LeR.	4-3½x4½	Gas.	1	Rex.....	12-25	1600	4	Wauk.	4-4½x5½	GorK	3	
Aultman-T.....	30-60		4	Own	4-7 x9	G,K,D	8	Hicks.....	15-30	1750	4	Wauk.	4-4½x6	GorK	4									
Automot. B-3..	12-24	1785	4	Here's	4-4 x5½	Gas.	2-3	Huber.....	12-25		4	Wauk.	4-4½x5½	GorK	3	Samson.....M	10-20	1060	4	Nov.	4-4 x5½	G,K	2	
Avery.SR.Cul.	5-10		4	Own	4-3 x4	G,K	2	Illinois.....C	18-36	2375	4	Clim.	4-5 x6½	G,K	4	Sandusky...J	10-20		4	Own	4-4½x5½	G,K,D	2	
Avery.Cult-C	5-10		3	Own	6-3 x4	G,K	2	Imperial...E	40-70	5000	4	Own	4-7½x9	G,K,D	10	Sandusky...E	15-35		4	Own	4-5 x6½	G,K,D	4	
Avery.....B	5-10		4	Own	4-3 x4	G,K	2	Indiana.....F	5-10		4	LeR.	4-3½x4½	Gas.	1	Shawnee....	6-12		2	LeR.	4-3½x4½	Gas.	4	
Avery.....C	5-10		4	Own	6-3 x4	G,K	2	International	8-16		4	Own	4-4½x5	G,K,D	2	Shawnee....	9-18		2	Gray	4-3½x5	G,K	2	
Avery.....	8-16		4	Own	2-5½x6	G,K,D	2-3	International	15-30		4	Own	4-5½x8	G,K,D	4	Shelby.....C	10-20		4	Erd.	4-4 x6	GorK	2-3	
Avery.....	12-25		4	Own	2-6½x7	G,K,D	3-4	International	15-30		4	Own	4-5½x8	G,K,D	4	Shelby.....D	15-30		4	Beav.	4-4½x6	G,K	3	
Avery.....	14-28		4	Own	4-4½x7	G,K,D	3-4	J-T.....N	16-30		2		4-4½x6	G,K		Short Turn..	20-40	1500	3		4-4½x6	G,K	3	
Avery.....	18-36		4	Own	4-5½x6	G,K,D	4-5	Kardel Util.	12-25	1650	4	Midw.	4-4½x5½	GorK	3	Square T.....	18-35	2075	3	Clim.	4-5 x6½	G,K	3	
Avery.....	25-50		4	Own	4-6½x7	G,H,D	5-6	Keck-Gon...	15-30	1650	4	Own	2-7½x8	G,K	7½	Steady Pull..	12-23	1485	4	Beav.	4-4 x5	Gas.	3	
Avery.....	45-65		4	Own	4-7½x8	G,K,D	8-10	Klumb.....F	16-32		4	Clim.	4-5 x6½	G,K	1	Stinson.....4E	18-36		4	Beav.	4-4½x6	G,K	4	
Bates All St..	15-25		4	Own	4-4½x6	Ker.	3	LaCrosse..M	7-12	900	4	Own	2-4 x6	G,K	1	Stone.....	20-40		4	Beav.	4-7½x9	G,K	4	
Bates.....S.M.	15-22		4	Own	4-4½x6	G,K,D	3	LaCrosse..H	12-24	1250	4	Own	2-6 x7	GorK	3-4	Tioga.....T3	15-27	2625	4	Wisc.	4-4½x6	Gas.	3-4	
Bean.....	8-16		4	Own	1-3½x4½	G,K	2-3	Lauson.....21	15-30		4	Beav.	4-4½x6	GorK	3-4	Titan.....	10-20		4	Own	2-6½x8	G,K,D	3	
Beeman.....G	4-2	340	4	Own	1-3½x4½	Gas.	½	Leader.....B	12-20		4	Own	2-6 x6½	G,K,D	2-3	Tillermore..A	2-6	335	4	Vur.	1-4 x4	G,K
Best.....30	20-30	3250	2	Own	4-4½x6½	G,K,D	4	Leader.....N	16-32		4	Clim.	4-5 x6½	G,K	3-4	Topp.....	30-45	4000	4	Wauk.	4-4½x6½	Gas.	3-4	
Best.....60	35-60	5750	2	Own	4-6½x8	G,K,D	8-10	Leader.....C	18-36		4	Clim.	4-5 x7½	G,K,D	4-6	Toro.....	6-12	950	4	LeR.	4-3½x4½	Gas.	2	
Boring.....	12-24	1200	3	Wauk.	4-4½x5½	GorK	2	Leader.....N	18-36		4	Clim.	4-5 x6½	G,K,D	3-4	Traylor.....T	6-12	815	4	LeR.	4-3½x4½	Gas.	1	
Bull.....	12-24	1200	3	Toro.	2-5½x7	G,K	3	Leonard...E	20-30	2530	4	Buda	4-4½x6	G,K	3	Triumph.....H	18-36	2450	2	Erd.	4-4½x6	Ker.	4	
Burn-Oil.....	15-30	1650	4	Own	2-6½x7	Ker.	3	Liberty.....A	18-32	2475	4	Clim.	4-5 x6½	G,K	4	Turner.....	14-25	1695	4	Buda	4-4½x5½	G,K	3	
Capital.....	15-30	1500	2	Own	4-4½x6	Gas.	33	Little Bear..	4	850	4	Ford	4-3½x4	Gas.	4	Twin City....	12-20		4	Own	4-4½x6	G,K	3	
Case.....	10-18		4	Own	4-3½x5	GorK	2	Little Giant.B	16-22	2200	4		4-4½x5	K.	4	Twin City....	20-35		4	Own	4-5½x6½	G,K	5	
Case.....	15-27		4	Own	4-4½x6	GorK	3	Little Giant.A	26-35	3300	4		4-5½x6	K.	6	Twin City....	40-65		4	Own	4-7½x9	G,K	8	
Case.....	22-40		4	Own	4-5½x6½	GorK	4-5	Lombard.....	85-150		2		6-5½x6½	Gas.	16									
Caterpillar T11	25		2	Own	4-4½x6	Gas.	4	Macultivator	1½	225	2	Own	1-2½x3½	Gas.	.....	Uncle Sam C20	12-20	1385	4	Wid	4-4 x5½	GorK	2-3
Caterpillar T16	40		2	Own	4-6½x7	Gas.	6	Magnet.....B	14-28	1875	4	Wauk.	4-4½x6½	K&G	3	Uncle Sam B19	20-30	2300	4	Beav.	4-4½x6	GorK	3-4	
Chase.....	12-25		3	Buda	4-4½x5½	GorK	2-3	Market.....	2-4½		.....	Vur.	1-4 x4	Gas.	.....	Universal.....	1-4	475	2	Own	1-3½x4½	G	1
Cietrac.....W	12-20		2	Own	4-4 x5½	G,K,D	2-3	Merry Jr....	4-8		.....	LeR.	2-5½x4	Gas.	1	Utilitor.....501	2½-4	380	4	Own	1-3½x4½	G	5-6
Dakota.....4	15-27	1750	3	Dom.	4-4½x6	Gas.	3	Master Gar..	2	230	2	Evin	1-2½x2½	Gas.	.....	Velie.....	12-24	1750	4	Own	4-4½x5½	G,K,D	3
Dart.....B.J.	15-30		4	Buda	4-4½x6	Gas.	3-4	Minne. All-P	12-25	1325	4	Own	4-4½x7	GorK	3	Victory.....	9-18	1385	4	Gray.	4-3½x5	Gas.	2	
Depue.....A	20-30	2500	4	Buda	4-4½x6	Gas.	4	Mohawk.....	9-16	755	4	Light	4-3½x4½	GorK	1-2	Victory.....	15-30	1750	4	Wauk.	4-4½x5½	Gas.	3	
Dill.....D	20	2480	4	Cont.	4-4½x5½	Gas.	3	Moline Univ D	9-18	1325	2	Own	4-3½x5	Gas.	2-3	Vim.....	15-30	1695	4	Wauk.	4-4½x5½	G,K	3	
Do-It-All.....	4-6	595	.....	Own	1-4½x5	Gas.	5-6	Moline Orch.	9-18	1375	2	Own	4-3½x5	Gas.	2-3								
Eagle.....F	12-22	1390	4	Own	2-7 x8	GorK	3-4	Monarch.....	30-18	3250	2	Beav.	4-4½x6	Ker.	4	Wallis.....K	15-25		4	Own	4-4½x5½	G,K	3	
Eagle.....F	16-30	1850	4	Own	2-8 x8	GorK	4-5	Motex.....	15-30	2250	4	Buda	4-4½x6	Gas.	3	Waterloo...N	12-25		4	Own	2-6½x7	G,K	3	
E-B.....	12-20		4	Own	4-4½x5	GorK	4	New Britain.1	3-6		4	Own	2-3½x4	Gas.	¾	Webfoot....	28-53	5250	2	Wisc.	4-5½x7	G,D	6	
Evans.....	18-30	2000	4	Buda	4-4½x6	G,K	4	New Britain.2	3-6		4	Own	2-2½x4	Gas.	¾	Wellington..B	16-30		4	Erd.	4-4 x6	Ker.	2-3	
								Nilson Spec.	10-20		4	Wauk.	4-3½x5½	Gas.	¾	Wellington..F	16-30		4	Chief	4-4½x6	Ker.	3-4	
								Nilson Senior	20-40		5	Wauk.	4-5 x6½	G,K	4	Wetmore...	12-25	1650	4	Wauk.	4-4 x5½	G,K	2-3	
Fageol.....D	9-12	1525	4	Lyc.	4-3½x5	Gas.	2	Oil Pull.....	12-20		4	Own	2-6 x8	K,D	3	Whitney....	9-18	1175	4	Own	2-5½x6½	Gas.	2	
Farm Horse...	18-30	1885	4	Clim.	4-5 x6½	G,K	3-4	Oliver.....A	15-30	395	4	Own	1-5½x6½	G,K,D	¾	Wichita.....T	15-30	2500	4	Beav.	4-4½x6	G,K,D	3-4	
Farquhar...	15-25		4	Buda	4-4½x6	G,K,D	3-4				2	Beav.	4-4½x6	GorK	3	Wisconsin...E	16-30	2250	4	Clim.	4-5 x6½	G,K,D	4	
Farquhar...	18-35		4	Own	4-6 x8	G,K,D	4-5				4	Own	2-8 x10	K,D	5-6									
Farquhar...	25-50		4	Own	4-7 x8	G,K,D	6-7				4	Own	2-10x12	K,D	8-10	Zelle.....	12-25		4		4-4½x5½	GorK	3	
Fitch.....4	20-35		4	Clim.	4-5 x6½	GorK	3	Oldsmar...	3-5		4	Own	1-5½x6½	G,K,D	¾									
Flour City...	20-35		4	Own	4-5½x6	Ker.	4-6	Oliver.....A	15-30		2	Beav.	4-4½x6	GorK	3									
Flour City...	30-50		4	Own	4-6½x7	Ker.	6-8	Parrett.....K	15-30		4	Pitt	4-4½x6	G,K	3									
Flour City...	40-70		4	Own	4-7½x9	Ker.	8-1	Peoria.....L	12-25	1785	4	Clim.	4-5 x6½	G,K	3									
Fordson.....	18-30	790	4	Own	4-3½x4	G,K	2	Pioneer.....	18-36		4	Own	4-5½x6	G,K,D	4									
Franklin BullG	18-30	3650	2	Clim.	4-5 x6½	GorK	3-4	Pioneer.....C	30-60		4	Own	4-7 x8	Gas.	10									
Frick.....A	12-20		4	Erd.	4-4 x6	G,K	2-3	Pioneer.....C	30-60		4	Own	4-7 x8	Gas.	10									
Frick.....C	15-28		4	Beav.	4-4½x6	G,K	3-4	Plowman.A	15-30	1995	4	Buda	4-4½x6	G,K	3-4									

ABBREVIATIONS: G—Gasoline, K—Kerosene, D—Dis-

tillate. Plow capacity varies in relation to operating conditions.

Figures are based on 14-in. plows. LeR.—LeRoi, Clim.—Climax.

Beav.—Beaver, Dom.—Doman, Cont.—Continental, Wauk.—

Waukesha, Wisc.—Wisconsin, T.C.—Twin City, Vur.—Vurac,

Evin.—Evinrude, Midw.—Midwest, Com.—Commercial Tractor.

*—Crawler type. All others are wheel type.

Specifications of Current Models of Passenger Cars

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy	6-3 1/4 x 5	123	32x4	\$2260	\$2260	\$3680	\$3680	Maibohm.....B	Ow.	6-3 1/4 x 4 1/2	116	32x4	1575	1575	2395	2395
Allen.....Series 43	Ow.	4-3 1/2 x 5	110	32x4	\$1395	1395	....	....	2395	Marmont.....34	Ow.	6-3 1/2 x 5 1/2	136	32x4 1/2	5300	5000	6150	6600
Ambassador.....R	12-2 1/2 x 5	136	32x4 1/2	Maxwell.....25	Ow.	4-3 1/2 x 4 1/2	109	30x3 1/2	995	995	1595	1695
American Six.....C	H-S.	6-3 1/4 x 5	127	32x4	2395	2395	\$2475	3295	3495	McFarlan.....1921	Ow.	6-4 1/2 x 6	140	33x5	6300	6300	7500	7500	
Anderson.....Series 40	Cont.	6-3 1/4 x 4 1/2	120	33x4	2195	1795	1845	2795	2795	Mercer.....Series 5	Ow.	4-3 1/2 x 6 1/2	132	32x4 1/2	3950	3950	5150	5650	
Apperson.....8-21-S	Ow.	8-3 1/4 x 5	130	34x4 1/2	3500	3500	4500	4500	Metz.....R&RR	Walk.	6-3 1/2 x 4 1/2	119	32x4	2245	2245
Apperson.....Anniversary	Ow.	8-3 1/4 x 5	130	34x4 1/2	....	4250	4250	6000	6000	Meteor.....M6	Rut.	6-3 1/2 x 5	120	32x4	1995	1995	2795	2895
Auburn.....6-39	Cont.	6-3 1/4 x 4 1/2	120	33x4	1745	1695	1695	2795	2795	Mitchell.....F-40	Ow.	6-3 1/2 x 5	120	32x4	1750	1750	2800	2900	
Beggs.....20T	Cont.	6-3 1/4 x 4 1/2	120	33x4	1885	1885	....	2785	2885	Mitchell.....F-42	Ow.	6-3 1/2 x 5	127	34x4 1/2	....	1995	....	....
Bour-Davis.....215	Cont.	6-3 1/2 x 5 1/2	126	33x4 1/2	2585	....	2885	....	....	Moon.....6-48	Cont.	6-3 1/2 x 4 1/2	122	32x4	2285	2185	2685	2985
Bradley.....Four	....	....	....	....	1285	....	....	....	....	Murray-Mac Six	Ow.	8-3 1/4 x 5	128	34x4 1/2	4250	4250	....	....
Brewster.....91	Ow.	4-4 x 5 1/2	125	32x4 1/2	7900	9000	....	10500	....	Nash.....681-6	Ow.	6-3 1/2 x 5	121	33x4	1695	1695	1850	2895
Briscoe.....4-34	Ow.	4-3 1/2 x 5	109	31x4	1285	1285	....	1885	1885	Nash.....682	Ow.	6-3 1/2 x 5	127	34x4 1/2	....	1875	2650	2895
Buick.....21-44-5-6-7	Ow.	6-3 1/2 x 4 1/2	118	33x4	1795	1795	....	2585	2895	Nash Four.....41-4	Ow.	4-3 1/2 x 5	112	32x3 1/2	1395	1395	1985	2185
Buick.....21-48-9-50	Ow.	6-3 1/2 x 4 1/2	124	24x4 1/2	....	....	2065	2985	3295	National Sixlet.....BB	Ow.	6-3 1/2 x 5 1/2	130	32x4 1/2	3750	3750	4900	4950
Cadillac.....59	Ow.	8-3 1/2 x 5 1/2	125	34x4 1/2	3790	3790	....	4950	....	Nelson.....D	Ow.	4-3 1/2 x 4 1/2	104	32x4	....	1900	....	....
Case.....V	Cont.	6-3 1/2 x 5 1/2	126	34x4 1/2	....	2650	2650	3400	3750	Noma.....1C	Cont.	6-3 1/2 x 5 1/2	128	32x4 1/2	3000	3200	....	4450
Chalmers.....6-30	Ow.	6-3 1/2 x 4 1/2	117	32x4	1795	1795	1945	2595	2745	Norwalk.....430-KS	Lyc.	4-3 1/2 x 5	116	32x3 1/2	....	1285	....	....
Chalmers.....6-30	Ow.	6-3 1/2 x 4 1/2	122	33x4 1/2	....	....	1945	....	....	Oakland.....34-C	Ow.	6-2 1/2 x 4 1/2	115	32x4	1395	1395	....	2065
Champion.....Tourist	Lyc.	4-3 1/2 x 5	113	32x3 1/2	....	1250	....	....	....	Ogren.....6-60	Ow.	6-3 1/2 x 5 1/2	134	33x5	3500	3900	5000	5400
Chandler.....Special	Ow.	4-3 1/2 x 5	118	32x4	1595	1595	....	....	....	Oldsmobile.....43-A	Ow.	4-3 1/2 x 5 1/2	115	32x4	1445	1445	2145	2145
Chevrolet.....490	Ow.	4-3 1/2 x 4	102	30x3 1/2	795	820	1325	1375	....	Oldsmobile.....47	Ow.	8-3 1/2 x 4 1/2	....	32x4	....	1695	2395	2395
Chevrolet.....FB	Ow.	4-3 1/2 x 4 1/2	110	33x4	1320	1345	....	2075	2075	Overland.....4	Ow.	4-3 1/2 x 4	100	30x3 1/2	895	895	1425	1475
Cleveland.....40	Ow.	6-3 x 4 1/2	112	32x4	1465	1465	....	2375	2475	Packard.....Single-Six	Ow.	6-3 1/2 x 4 1/2	116	33x4 1/2	2975	2975	4150	4250
Climber Six.....S	Li-S.	6-3 1/2 x 5	125 1/2	32x4 1/2	2750	2750	....	....	....	Packard.....Twin Six	Ow.	12-3 x 5	136	35x5	6000	6000	8200	8450
Cole.....870	Port.	8-3 1/2 x 4 1/2	127	33x5	3250	3250	4250	4450	....	Paige.....6-42	Ow.	6-3 1/2 x 5	119	32x4	1795	1795	2600	2720
Columbia.....D-C&CS	Cont.	6-3 1/2 x 4 1/2	115	32x4	1945	1795	....	2895	2895	Paige.....6-66	Cont.	6-3 1/2 x 5	131	33x4 1/2	2985	2895	3775	3850
Comet.....C-53	Cont.	6-3 1/2 x 5 1/2	125	33x4 1/2	....	2350	2450	....	....	Pan.....A	Ow.	4-3 1/2 x 5	108	33x4	....	1500	....	....
Commonwealth.....44	H-S.	4-3 1/2 x 5	117	32x4	....	1595	....	2495	....	Pan American E&F-6-55	H-S.	6-3 1/2 x 5	121	33x4	2250	2250	....	....
Crawford.....21-6-40	Cont.	6-3 1/2 x 4 1/2	122 1/2	32x4	3000	3000	....	4500	....	Parenti.....1921	Ow.	8-2 1/2 x 4 1/2	123	32x4	....	2000	....	3000
Crow-Elkhart.....L63-65	Lyc.	4-3 1/2 x 5	117	32x3 1/2	1295	1295	....	2195	....	Paterson.....650	Cont.	6-3 1/2 x 4 1/2	120	33x4	....	1895	1925	2895
Crow-Elkhart.....S63-65	H-S.	6-3 1/2 x 5	117	33x4	1545	1545	....	2395	....	Peersless.....56-S-7	Ow.	8-3 1/2 x 5	125	34x4 1/2	....	2990	2990	3680
Cunningham.....V-4	Ow.	8-3 1/2 x 5	132	35x5	6200	6200	6700	7600	7600	Piedmont.....4-30	Lyc.	4-3 1/2 x 5	116	32x3 1/2	....	1485	....	....
Daniels.....D-19	Ow.	8-3 1/2 x 5 1/2	132	34x4 1/2	5350	5350	6250	6950	....	Piedmont.....6-40	Cont.	6-3 1/2 x 4 1/2	122	32x4	....	1945	....	....
Davis.....51-57	Cont.	6-3 1/2 x 4 1/2	120	33x4	1995	1895	2150	2795	2795	Pierce-Arrow.....Ow.	6-4 x 5 1/2	138	35x5	8000	7500	....	9000	
Dispatch.....G	Ow.	4-3 1/2 x 5	120	34x4	1290	1350	1525	1575	....	Pilot.....6-50	H-S.	6-3 1/2 x 5	126	32x4 1/2	2285	2285	3600	3600
Dixie Flyer.....H-S-70	Ow.	4-3 1/2 x 5	112	32x4	1595	1595	....	2570	2570	Porter.....40	Ow.	4-4 x 6 1/2	142	35x5	6750	Chassis Price	....	....
Dodge Brothers.....6-80	Ow.	4-3 1/2 x 4 1/2	114	32x3 1/2	1235	1285	....	1900	2150	Premier.....6-D	Ow.	6-3 1/2 x 5 1/2	126 1/2	33x5	4600	4600	5600	6100
Dorris.....17-A	D-Ly	4-3 1/2 x 5	108	31x4	1215	1215	....	1865	1995	Premocar.....6-40	Falls.	6-3 1/2 x 4 1/2	117	32x3 1/2	....	1295	....	....
Dort.....17-A	Ow.	4-3 1/2 x 5 1/2	124	32x4 1/2	3400	3400	....	4900	....	Premocar.....4-4	x6	117	32x4 1/2	....	3865	....	....
Dupont.....A	Ow.	4-3 1/2 x 5 1/2	124	32x4 1/2	....	....	....	....	....	Raleigh.....A-6-60	H-S.	6-3 1/2 x 5	122	32x4 1/2	2750	2750	3600	3700
Elcar.....7-R	Cont.	6-3 1/2 x 4 1/2	117	33x4	1795	1795	1795	2500	2600	Ranger.....A-20	Ow.	4-3 1/2 x 5	116	32x4	....	2150	....	....
Elgin.....K-1	Falls.	6-3 1/2 x 4 1/2	118	33x4	1895	1775	....	2685	2685	R & V Knight.....R	Ow.	4-3 1/2 x 5	116	32x4	....	....	....	....
Essex.....A	Ow.	4-3 1/2 x 5	108 1/2	32x4	1595	1595	....	2100	2450	R & V Knight.....J	Ow.	6-3 1/2 x 4 1/2	127	32x4 1/2	3350	3350	4000	4200
Ferris.....Cont.	....	6-3 1/2 x 5 1/2	130	32x4 1/2	3350	....	3350	....	4875	Reo.....T-6	Ow.	6-3 1/2 x 5	120	33x4	1850	1850	2700	2750
Ford.....T	Ow.	4-3 1/2 x 4	100	30x3 1/2	395	440	745	795	....	Revere.....C	Dues.	4-3 1/2 x 6	131	32x4 1/2	4850	4650	4650	6500
Franklin.....9-B	Ow.	6-3 1/2 x 4	115	32x4	2700	2800	2750	3850	....	Roamer.....6-54-E	Cont.	6-3 1/2 x 5 1/2	130	32x4 1/2	....	....	4500	5000
Friend.....Four	Ow.	4-3 1/2 x 4 1/2	112	32x3 1/2	1585	1585	....	2485	2585	Rock Falls.....14000	Cont.	6-3 1/2 x 5 1/2	136	35x5	....	....	....	....
Globe.....B-13	Supre.	4-3 1/2 x 5	115	32x4	....	....	....	....	....	Rolls-Royce.....Ow.	6-4 1/2 x 4 1/2	143 1/2	33x5	11,500	Chassis Price	....	....
Grant.....HX	Ow.	6-3 1/2 x 4 1/2	116	32x4	1550	1550	....	2450	2450	Saxon.....125	Ow.	4-3 1/2 x 5	112	32x4	....	1675	....	2475
Gardner.....G	Lyc.	4-3 1/2 x 5	112	32x3 1/2	1195	1195	....	2145	2145	Sayers Six.....DP	Cont.	6-3 1/2 x 4 1/2	118	33x4	2495	2195	....	3295
Halladay.....21	Rut.	6-3 1/2 x 5	116	33x4	....	2285	....	....	....	Scripps-Booth.....B-39-42	Nort.	6-2 1/2 x 4 1/2	115	32x4	1545	1545	2215	2295
Handley-Knight.....Kn't.	....	4-4 1/2 x 4 1/2	125	32x4 1/2	....	2985	....	4185	....	Seneca.....L	LeR.	4-3 1/2 x 4 1/2	108	30x3 1/2	1185	1185	....	....
Hanson Six.....60	Cont.	6-3 1/2 x 4 1/2	121	32x4	2365	2365	2465	3565	....	Severin.....Six	Cont.	6-3 1/2 x 5 1/2	122	32x4	....	2550	....	....
Hatfield.....A-42	H-S.	4-3 1/2 x 5	115	32x4	1695	1695	....	2595	....	Sheridan.....4	Nort.	4-3 1/2 x 5 1/2	116	33x4	1685	1685	....	....
Haynes.....47	Ow.	6-3 1/2 x 5	132	34x4 1/2	3500	2935	2935	4250	....	Sheridan.....8	Nort.	8-3 1/2 x 4 1/2	132	33x5	....	....	....	....
Haynes.....48	Ow.	12-2 1/2 x 5	132	34x4 1/2	4200	3635	3635	4950	....	Skelton.....35	Lyc.	4-3 1/2 x 5	112	32x3 1/2	1295	1295	....	1950
Huffman.....R	Cont.	6-3 1/2 x 4 1/2	120	32x4	1995	1995	....	2975	....	Standard.....1	Ow.	8-3 1/2 x 5	127	34x3 1/2	3400	3400	4500	4800
H.C.S.....Series 3	Weid.	4-3 1/2 x 5 1/2	120	32x4 1/2	2925	2975	....	3650	....	Stanley Steamer.....Ow.	2-4 x 5	130	34x4 1/2	....	3950	3950	5650	5775
Holmes.....Series 4	Ow.	6-3 1/2 x 4 1/2	126	34x4 1/2	3350	....	3350	4250	4550	Stanwood Six.....Cont.	6-3 1/2 x 4 1/2	118	33x4	12050	2050	2950	....	
Hudson Super 6.....O	Ow.	6-3 1/2 x 4 1/2	126	34x4 1/2	2400	3625	2400	3275	3400	Stearns.....SKLA	Ow.	4-3 1/2 x 5 1/2	125	34x4 1/2	2550	2450	2675	3400	
Hupmobile.....Series R	Ow.	4-3 1/2 x 5 1/2	112	32x4	1685	1685	....	2725	2800	Stevens.....90	Ow.	6-3 1/2 x 4 1/2	122	33x4 1/2	2400	2400	2400	3400
Jackson.....638	Cont.	6-3 1/2 x 4 1/2	121	32x4 1/2	2685	1950	....	3760	3760	Stevens Duryea.....E	Ow.	6-4 1/2 x 5 1/2	138	35x5	8500	8000	....	9500
Jordan.....M	Cont.	6-3 1/2 x 4 1/2	120	32x4	2650	2650	2875	3700	3700	Studebaker.....EJ-40	Ow.	6-3 1/2 x 4 1/2	112	32x4	1650	1485	....	2150
Kenworthy.....8-9	Ow.	8-3 x 5 1/2	130	32x4 1/2	5000	5000	5250	....	....	Studebaker.....EH-50	Ow.	6-3 1/2 x 5	119	32x4	1750	1750	2650	2750
King.....H	Ow.	8-3 x 5	120	32x4 1/2	2740	2725	2725	403											

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES	Final Drive
				Front Rear						Front Rear	
Acason, R	1	\$2280	3 1/2 x 5	36x4 36x4	W	Concord, B	1	\$2280	3 1/2 x 5	36x4 36x4	W
Acason, RB	1 1/2	2485	3 1/2 x 5	36x4 36x4	W	Concord, AX	1 1/2	2485	3 1/2 x 5	36x4 36x4	W
Acason, H	2 1/2	3395	3 1/2 x 5	36x4 36x4	W	Concord, BX	2 1/2	3395	3 1/2 x 5	36x4 36x4	W
Acason, L	3 1/2	4295	3 1/2 x 5	36x4 36x4	W	Conestoga, 12	3 1/2	4295	3 1/2 x 5	36x4 36x4	W
Acason, M	5	5250	3 1/2 x 5	36x4 36x4	W	Conestoga, 20	5	5250	3 1/2 x 5	36x4 36x4	W
Aco, C	1 1/2	2750	3 1/2 x 5	34x3 1/2 34x5	W	Conestoga, 30	1 1/2	2750	3 1/2 x 5	34x3 1/2 34x5	W
Aco, A	2 1/2	3450	3 1/2 x 5	36x4 36x4	W	Cook, 41	2 1/2	3450	3 1/2 x 5	36x4 36x4	W
Aco, B	3	3650	3 1/2 x 5	36x4 36x4	W	Corbett, E	3	3650	3 1/2 x 5	36x4 36x4	W
Acme, F	1 1/2	3175	3 1/2 x 5	34x3 1/2 34x5	W	Corbett, D	1 1/2	3175	3 1/2 x 5	34x3 1/2 34x5	W
Acme, A	2	3050	3 1/2 x 5	36x4 36x4	W	Corbett, C	2	3050	3 1/2 x 5	36x4 36x4	W
Acme, C	2 1/2	4050	3 1/2 x 5	36x4 36x4	W	Corbett, A	2 1/2	4050	3 1/2 x 5	36x4 36x4	W
Acme, E	5	5150	3 1/2 x 5	36x4 36x4	W	Corbett, AA	5	5150	3 1/2 x 5	36x4 36x4	W
Acme, G	3 1/2	1700	3 1/2 x 5	34x3 1/2 34x5	W	Dart, S	1 1/2	1700	3 1/2 x 5	34x3 1/2 34x5	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Dart, M	2 1/2	5800	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Dart, W	2 1/2	5800	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2 34x5	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2 34x5	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, C	2	2750	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, D	2 1/2	2950	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, E	3 1/2	3750	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, F	5	4000	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, G	1 1/2	2180	3 1/2 x 5	34x3 1/2 34x5	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, H	2 1/2	2590	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, I	3 1/2	2550	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, J	5	2750	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, K	2	2250	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, L	2 1/2	2800	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, M	3 1/2	2800	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, N	5	3800	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, O	1	4000	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, P	2	4350	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, Q	3	4650	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, R	4	4850	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, S	5	5050	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, T	1	1650	3 1/2 x 5	34x3 1/2 34x5	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, U	1 1/2	2350	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, V	2 1/2	2650	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, W	3 1/2	2950	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, X	5	3550	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, Y	1	2500	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, Z	2	2900	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AA	3	3200	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AB	4	3500	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AC	5	3800	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AD	1	4000	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AE	2	4300	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AF	3	4600	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AG	4	4900	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AH	5	5200	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AI	1	5500	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AJ	2	5800	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AK	3	6100	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AL	4	6400	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AM	5	6700	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AN	1	7000	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AO	2	7300	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AP	3	7600	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AQ	4	7900	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AR	5	8200	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AS	1	8500	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AT	2	8800	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AU	3	9100	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AV	4	9400	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AW	5	9700	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AX	1	10000	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AY	2	10300	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, AZ	3	10600	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, BA	4	10900	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, BB	5	11200	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, BC	1	11500	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, BD	2	11800	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, BE	3	12100	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, BF	4	12400	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, BG	5	12700	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, BH	1	13000	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36x4 36x4	W	Day-Elder, BI	2	13300	3 1/2 x 5	36x4 36x4	W
Albion-Tri-20	1 1/2	5800	3 1/2 x 5	36							

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES	Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES	Final Drive
				Front Rear						Front Rear						Front Rear	
Lange, B	2 1/2	3350	3 1/2 x 5 1/2	36x4 3/4 36x8 3/4	C	Parker, J20	3 1/2	4400	4 1/2 x 6 1/2	36x5 3/4 40x5d	W	Sullivan, E	2	3350	4 1/2 x 5 1/2	36x4 3/4 36x7 1/2	W
Larrabee, U	1 1/2	2400	3 1/2 x 5 1/2	34x3 1/2 34x5 1/2	W	Parker, M20	5	5500	4 1/2 x 6 1/2	36x6 3/4 40x6d	W	Sullivan, H	3 1/2	4650	4 1/2 x 5 1/2	36x5 3/4 36x5d	W
Larrabee, K	2 1/2	3400	4 1/2 x 5 1/2	36x4 3/4 36x7 1/2	W	Patriot, Revere	1 1/2	1785	3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	W	Superior, D	1	1800	3 1/2 x 5 1/2	34x4 1/2 34x4 1/2	I
Larrabee, L	3 1/2	4200	4 1/2 x 5 1/2	36x5 3/4 36x5d	W	Patriot, Lincoln	1 1/2	2450	4 x 5 1/2	34x3 1/2 34x5 1/2	W	Superior, E	2	2750	4 1/2 x 5 1/2	36x4 3/4 36x6 1/2	I
Larrabee, W	5	5100	4 1/2 x 6 1/2	36x6 3/4 40x6d	W	Patriot, Washg'tn	2 1/2	3450	4 1/2 x 5 1/2	36x4 3/4 36x7 1/2	W	Super Truck, 50	2 1/2	3300	4 x 6	36x4 3/4 36x8 1/2	W
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4 3/4 36x4d	W	Piedmont, 4-30	1 1/2	1685	3 1/2 x 5 1/2	34x4 1/2 34x4 1/2	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5 3/4 40x5d	W
Lion, L	1	\$2350	3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	W	Pierce-Arrow, 5	2	3750	4 x 5 1/2	36x4 3/4 36x4d	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5 3/4 40x12	W
Lone Star, 9	1 1/2	1545	3 1/2 x 5 1/2	32x3 1/2 32x4 1/2	I	Pierce-Arrow, 5	3 1/2	4950	4 1/2 x 6 1/2	36x5 3/4 36x5d	W	Super Truck, 150	7 1/2	6300	5 x 6	36x6 3/4 40x7d	W
Leedinghaus, K	2	3150	4 1/2 x 5 1/2	36x4 3/4 36x7 1/2	W	Pierce-Arrow	5	\$5700	4 1/2 x 6 1/2	36x5 3/4 40x6d	W	Texas, A35	4 1/2	.....	3 1/2 x 5 1/2	33x4 3/4 33x4 3/4	I
Leedinghaus	1	2100	3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	W	Pioneer, A7	1	1550	3 1/2 x 4 1/2	32x4 1/2 32x4 1/2	W	Texas, TK39	1 1/2	.....	3 1/2 x 5 1/2	36x6 3/4 38x7 1/2	W
Leedinghaus	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2 34x5 1/2	W	Pittsburgh, B	2 1/2	3500	4 1/2 x 5 1/2	36x5 3/4 36x7 1/2	W	Texas, TK	1 1/2	.....	3 1/2 x 5 1/2	36x6 3/4 38x7 1/2	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4 3/4 36x6 1/2	W	Pony	1 1/2	400	2 1/2 x 4 1/2	28x3 1/2 28x3 1/2	C	Tiffin, F15	1 1/2	2695	4 1/2 x 5 1/2	36x3 1/2 36x5 1/2	W
Maccar, M-2	2 1/2	3650	4 1/2 x 5 1/2	36x4 3/4 36x4d	W	Power, F	1 1/2	.....	3 1/2 x 5 1/2	36x6 3/4 36x6 1/2	W	Tiffin, F25	2 1/2	3580	4 1/2 x 5 1/2	36x4 3/4 36x3 1/2	W
Maccar, M-2	3 1/2	4500	4 1/2 x 6 1/2	36x5 3/4 36x5d	W	Power, C	3 1/2	.....	4 1/2 x 5 1/2	36x5 3/4 40x10	W	Tiffin, F35	3 1/2	4760	4 1/2 x 5 1/2	36x5 3/4 40x5d	W
Maccar, G	5	5500	4 1/2 x 6 1/2	36x5 3/4 40x6d	W	Premcar, B-143	1 1/2	.....	3 1/2 x 5 1/2	36x6 3/4 36x6 1/2	W	Tiffin, F50	5	5850	4 1/2 x 6	36x6 3/4 40x6d	W
MacDonald, A	15	5750	4 1/2 x 6 1/2	40x7 1/2 40x14	I	Rainier, R-11	3 1/2	2150	3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	W	Tiffin, F60	6	6050	4 1/2 x 6	36x6 3/4 40x12	W
Mack, AB D.R.	1 1/2	3450	4 x 5	36x4 3/4 36x3 1/2	D	Rainier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36x5 3/4 36x5d	W	Titan, HT	3 1/2	4550	4 1/2 x 6	34x4 3/4 40x5d	I
Mack, AB Chain	1 1/2	3000	4 x 5	36x4 3/4 36x3 1/2	D	Rainier, R-19	1	2350	3 1/2 x 5 1/2	34x3 1/2 31x4	W	Titan, HD	6	5400	4 1/2 x 6	36x4 3/4 40x6d	I
Mack, AB Chain	2	3300	4 x 5	36x4 3/4 36x4d	C	Rainier, R-16	1 1/2	2600	3 1/2 x 5 1/2	34x3 1/2 34x5 1/2	W	Titan, TS	2 1/2	3400	4 1/2 x 6 1/2	34x4 3/4 36x4d	I
Mack, AB D.R.	2	3750	4 x 5	36x4 3/4 36x4d	D	Rainier, R-18	2	2950	4 1/2 x 5 1/2	34x4 3/4 34x6 1/2	W	Tower, J	1 1/2	3000	4 1/2 x 6 1/2	35x5 3/4 38x7 1/2	W
Mack, AC Chain	3 1/2	4950	5 x 6	36x5 3/4 40x5d	C	Rainier, R20	2 1/2	3650	4 1/2 x 5 1/2	34x4 3/4 34x7 1/2	W	Tower, H	2 1/2	3475	4 1/2 x 6 1/2	36x4 3/4 36x7 1/2	W
Mack, AC	5	5500	5 x 6	36x6 3/4 40x6d	C	Rainier, R17	5	5250	4 1/2 x 5 1/2	36x6 3/4 36x6d	W	Tower, G	3 1/2	4400	4 1/2 x 6 1/2	36x5 3/4 36x5d	W
Mack, AC	6 1/2	5750	5 x 6	36x6 3/4 40x6d	C	Ranger, TK-22	2	2875	3 1/2 x 5 1/2	36x6 3/4 36x6 1/2	W	Traffic, C	2	1595	3 1/2 x 5 1/2	34x3 1/2 34x5 1/2	I
Mack, AC	7 1/2	6000	5 x 6	36x6 3/4 40x7d	C	Reo, F	3 1/2	1335	4 1/2 x 4 1/2	34x4 1/2 34x4 1/2	B	Transport, 20	1	1850	4 1/2 x 5 1/2	36x3 1/2 34x4 1/2	I
Mack Trac, AB	5	3400	4 x 5	36x4 3/4 36x4d	C	Reliance, 10A	1 1/2	2500	4 x 5 1/2	36x3 1/2 36x5 1/2	I	Transport, 30	1 1/2	2250	3 1/2 x 5 1/2	36x3 1/2 36x5 1/2	I
Mack Trac, AC	7	4950	5 x 6	36x5 3/4 40x5d	C	Reliance, 20B	2 1/2	3200	4 1/2 x 5 1/2	36x4 3/4 36x4d	I	Transport, 50	2 1/2	2785	4 1/2 x 5 1/2	36x4 3/4 36x7 1/2	I
Mack Trac, AC	10	5500	5 x 6	36x6 3/4 40x6d	C	Republic, 10E	1	1645	3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	I	Transport, 70	3 1/2	4195	4 1/2 x 6	36x5 3/4 36x10	I
Mack Trac, AC	13	5750	5 x 6	36x6 3/4 40x12	C	Republic, 11X	1 1/2	2195	3 1/2 x 5 1/2	34x3 1/2 34x5 1/2	I	Traylor, B	1 1/2	2500	3 1/2 x 5 1/2	34x3 1/2 34x5 1/2	W
Mack Trac, AC	15	6000	5 x 6	36x7 1/2 40x7d	C	Republic, 19	2 1/2	2795	4 1/2 x 5 1/2	36x4 3/4 36x7 1/2	I	Traylor, C	2	3000	4 x 5 1/2	36x4 3/4 36x7 1/2	W
Mapleleaf, AA	3	.....	4 x 5 1/2	34x4 3/4 36x6	W	Republic, 20	2 1/2	3845	4 1/2 x 5 1/2	36x5 3/4 36x10	I	Traylor, D	3	3500	4 1/2 x 5 1/2	36x4 3/4 36x8 1/2	W
Mapleleaf, BB	4	.....	4 1/2 x 5 1/2	36x4 3/4 36x4d	W	Riker, B	3	.....	4 1/2 x 6	36x5 3/4 36x5d	W	Traylor, E	4	4700	4 1/2 x 6	35x5 3/4 40x10	W
Mapleleaf, CC	3	.....	4 1/2 x 5 1/2	36x5 3/4 36x5d	W	Riker, BB	4	.....	4 1/2 x 6	36x5 3/4 36x6d	W	Traylor, F	5	5100	4 1/2 x 6	35x5 1/2 35x5 1/2	I
Mapleleaf, DD	4	.....	4 1/2 x 5 1/2	36x6 3/4 40x6d	W	Rover, CW	1 1/2	3000	3 1/2 x 5 1/2	36x6 3/4 36x6 1/2	W	Triangle, AA	1	1600	3 1/2 x 5 1/2	35x5 1/2 35x5 1/2	I
Master, JW	1 1/2	2690	4 1/2 x 5 1/2	34x3 1/2 34x5 1/2	W	Rover, HW	4	4500	4 1/2 x 6	36x5 3/4 36x6d	W	Triangle, A	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2 34x6 1/2	I
Master, W	2 1/2	3290	4 1/2 x 5 1/2	34x4 3/4 36x7 1/2	D	Rover, C. D. W.	2	3300	4 x 5	34x4 3/4 36x3 1/2	W	Triangle, C	2	2700	3 1/2 x 5 1/2	36x4 3/4 36x6 1/2	I
Master, D	2 1/2	3540	4 1/2 x 5 1/2	34x4 3/4 36x7 1/2	D	Rover, G. S. W.	3	4150	4 x 5	34x5 3/4 36x5d	W	Triangle, B	2 1/2	2950	4 x 5 1/2	36x4 3/4 36x7 1/2	I
Master, A	3 1/2	4190	4 1/2 x 6	36x5 3/4 40x5d	D	Rover, G. P. W.	3	5250	3 1/2 x 5 1/2	38x7 1/2 42x9 1/2	W	Twin City, B.W.	2	3000	4 x 5 1/2	36x4 3/4 36x7 1/2	I
Master, E	3 1/2	4640	4 1/2 x 6	36x5 3/4 40x5d	D	Rover, F. W.	5	5500	4 1/2 x 6	36x6 3/4 40x6d	W	Twin City, A. W.	3 1/2	4400	4 1/2 x 6	36x5 3/4 40x5d	W
Master, B	5	5290	4 1/2 x 6 1/2	36x6 3/4 40x6d	D	Rumely, A	1 1/2	2720	3 1/2 x 5 1/2	36x3 1/2 36x5 1/2	B	Twin City, FWDB	3 1/2	.....	5 1/2 x 6	36x6 3/4 36x6 1/2	I
Master, F	5	5440	4 1/2 x 6 1/2	36x5 3/4 40x6d	D	Samsen, 15	1 1/2	.....	3 1/2 x 5 1/2	32x4 3/4 32x4 3/4	B	Twin City, FWDA	5	.....	5 1/2 x 6	36x7 1/2 36x7 1/2	I
Master Trac, T	6	3740	4 1/2 x 5 1/2	34x4 3/4 36x4d	I	Samsen, 25	1 1/2	.....	3 1/2 x 5 1/2	35x5 3/4 35x5 3/4	B	Ultimate, A	2	3200	4 x 5 1/2	36x3 1/2 36x5 1/2	W
Maxwell, 1 1/2	1 1/2	.....	3 1/2 x 4 1/2	32x3 1/2 32x4 1/2	W	Sandew, G	1 1/2	2295	3 1/2 x 5 1/2	34x3 1/2 34x5 1/2	W	Ultimate, AJ	2	3250	4 1/2 x 5 1/2	35x5 1/2 38x7 1/2	W
Menominee, HT	1	2080	3 1/2 x 5 1/2	34x3 1/2 36x5 1/2	W	Sandew, CG	1 1/2	2590	3 1/2 x 5 1/2	34x4 3/4 34x6 1/2	W	Ultimate, B	3	8750	4 1/2 x 5 1/2	36x4 3/4 36x4d	W
Menominee, H	1 1/2	2725	4 x 5	36x3 1/2 36x5 1/2	W	Sandew, J	2 1/2	3375	4 1/2 x 5 1/2	36x4 3/4 36x7 1/2	W	Ultimate, BL	3	3850	4 x 6	36x5 3/4 36x8 1/2	I
Menominee, D	2	3245	4 x 6	36x4 3/4 36x4d	W	Sandew, M	3 1/2	4295	4 1/2 x 5 1/2	36x5 3/4 36x5d	W	Union, F	2 1/2	3150	4 x 6	36x5 3/4 36x8 1/2	I
Menominee, G	3 1/2	4270	4 1/2 x 6	36x5 3/4 36x5d	W	Sandew, L	5	.....	4 1/2 x 5 1/2	36x6 3/4 40x6d	W	Union, H	4	3975	4 1/2 x 6	36x6 3/4 36x10	I
Menominee, J3	5	5450	4 1/2 x 6	36x6 3/4 40x6d	W	Sandew, 25	2 1/2	3350	4 1/2 x 5 1/2	36x4 3/4 36x4d	W	Union, J	6	5450	5 x 6	36x6 3/4 40x14	I
Moline, 10	1 1/2	2450	3 1/2 x 5 1/2	34x5 1/2 36x6 1/2	W	Sandew, 35	3 1/2	4200	4 1/2 x 5 1/2	36x5 3/4 36x5d	W	United, A	1 1/2	2445	3 1/2 x 5 1/2	36x3 1/2 34x5 1/2	I
Moreland, 20N	1 1/2	2850	3 1/2 x 5 1/2	35x5 1/2 36x6 1/2	I	Sandew, 50	5	5100	4 1/2 x 6	36x5 3/4 40x6d	W	United, B	2 1/2	3150	4 1/2 x 5 1/2	36x4 3/4 36x7 1/2	I
Moreland, 20B	1 1/2	3125	4 1/2 x 5 1/2	36x3 1/2 36x6 1/2	W	Schacht, 2-Ten	2	3550	4 1/2 x 5 1/2	36x4 3/4 36x7 1/2	W	United, C	3 1/2	3975	4 1/2 x 5 1/2	36x5 3/4 36x5d	I
Moreland, 20C	2 1/2	3900	4 1/2 x 6	36x4 3/4 36x8 1/2	W	Schacht, 2 1/2-Ten	2 1/2	3850	4 1/2 x 5 1/2	36x4 3/4 36x4d	W	United, V	5	5100	4 1/2 x 6	36x6 3/4 40x6d	I
Moreland, 20G	2 1/2	4975	4 1/2 x 6	36x5 3/4 40x5d	W	Schacht, 3 1/2-Ten	2 1/2	4350	4 1/2 x 6	36x5 3/4 36x5d	W	U. S. N	1 1/2	2475	3 1/2 x 5 1/2	36x3 1/2 36x5 1/2	I
Moreland, 20J	5	5350	4 1/2 x 6	36x6 3/4 40x6d	W	Schacht, 5-Ten	5	5350	4 1/2 x 6	36x5 3/4 40x6d	W	U. S. R	3	2795	4 x 5 1/2	36x4 3/4 36x4d	W
Mutual, 2B	2 1/2	3450	4 x 6	36x4 3/4 36x8 1/2	W	Schwartz, A	1	1585	3 1/2 x 5 1/2	33x4 1/2 33x4 1/2	B	U. S. S	4	4595	4 1/2 x 5 1/2	36x5 3/4 36x5d	W
Mutual, 2BP	2 1/2	4150	4 x 6	36x7 1/2 42x9 1/2	W	Schwartz, BW	1 1/2	2600	3 1/2 x 5 1/2	34x3 1/2 34x7 1/2	W	U. S. T	6	5850	4 1/2 x 5 1/2	36x6 3/4 40x6d	W
Napoleon, 7	1 1/2	1535	3 1/2 x 5 1/2	36x4 3/4 36x5 1/2	I	Schwartz, C.W.S.	2 1/2	3200	4 1/2 x 5 1/2	36x4 3/4 36x8 1/2	W	Valie, 46	1 1/2	2200	3 1/2 x 5 1/2	36x3 1/2 36x5 1/2	I
Napoleon, 7	1 1/2	1860	3 1/2 x 5 1/2	35x5 3/4 35x5 3/4	I	Schwartz, DW	5	4900	4 1/2 x 6	36x6 3/4 40x12	W	Victor, A	1 1/2	2050	3 1/2 x 5 1/2	34x4 3/4 34x5 1/2	I
Napoleon, 11	1 1																

MOTOR WORLD

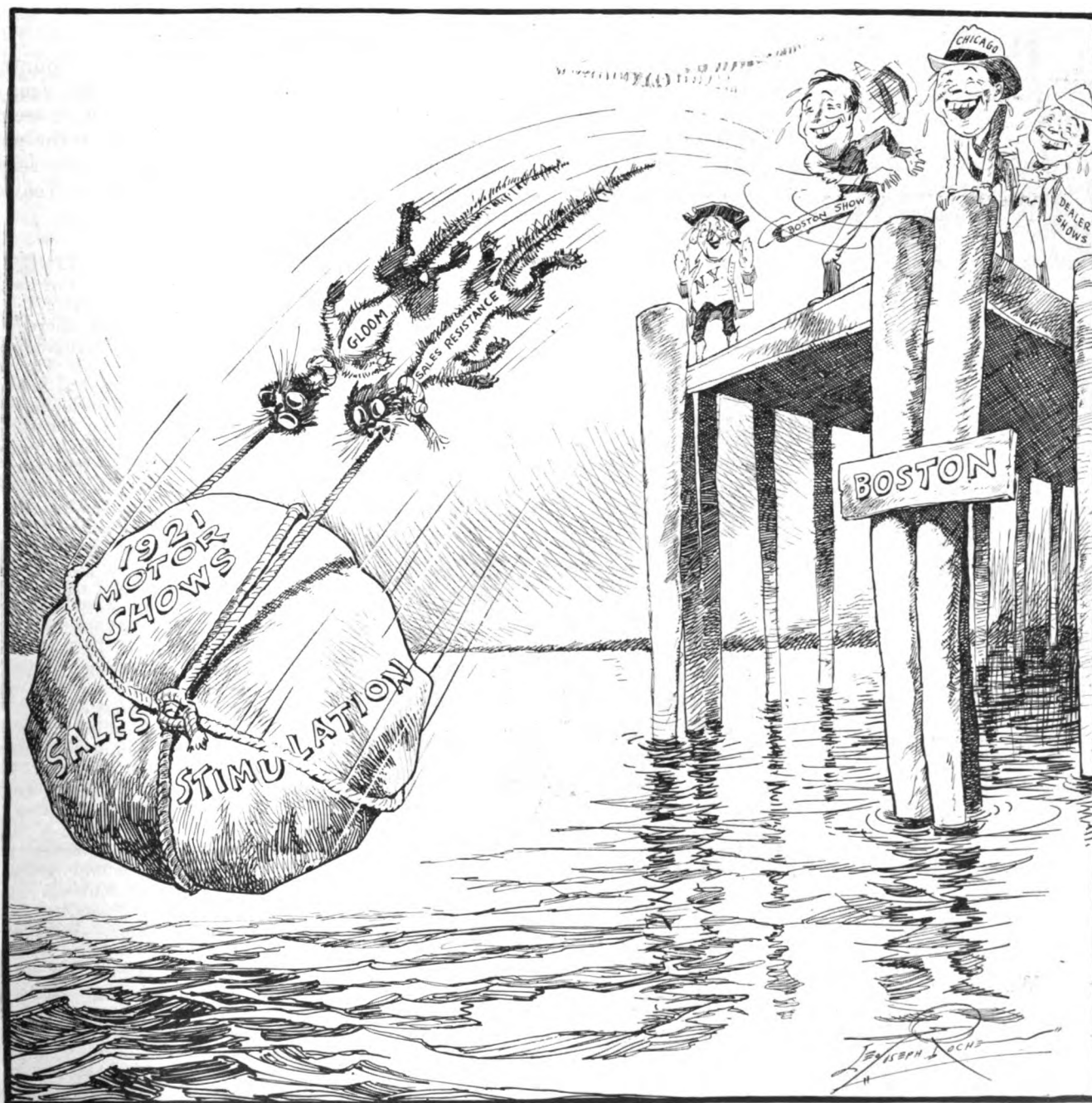
DEALERS, JOBBERS AND GARAGEMEN

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No. 12

The Final Push



The Boston Tea Party Had Nothing on This One

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Boston Show Heralds Arrival of New Merchandising Era

New England Exhibit Shows "Back to Selling" Movement Gaining Momentum and Many Distributors Pressing Factories for Increased Deliveries—Gloom Flung Overboard in Big Merchandising Revival

By LEON F. BANIGAN

BOSTON, March 17.

THE day has arrived when intensive merchandising must accompany the distribution of automotive products. Realization of this fact by manufacturer, distributor and dealer alike was indicated at the Nineteenth Annual Boston Automobile Show in Mechanics Building here this week.

THE shows, which opened in New York early in January and have blazed the merchandising trail Westward to the Golden Gate, were studied this year as the shows of no other season were. They were the barometers that marked the rising of the humidity of after-the-war depression and foretold in the steadily rising column of sales the coming of the bright, warm days of renewed buying activity.

But, to the manufacturer, the distributor and the dealer they told more than the revival of buying. They brought home forcibly the fact that the revival of selling was, in a great measure, the product of the revival of selling—that from this day henceforth the automotive industry must develop and intensify the merchandising of its products and insure their distribution through co-operative selling effort, through merchandising scientifically applied to the unit of sale, down through the channels of distribution from the maker to the consumer.

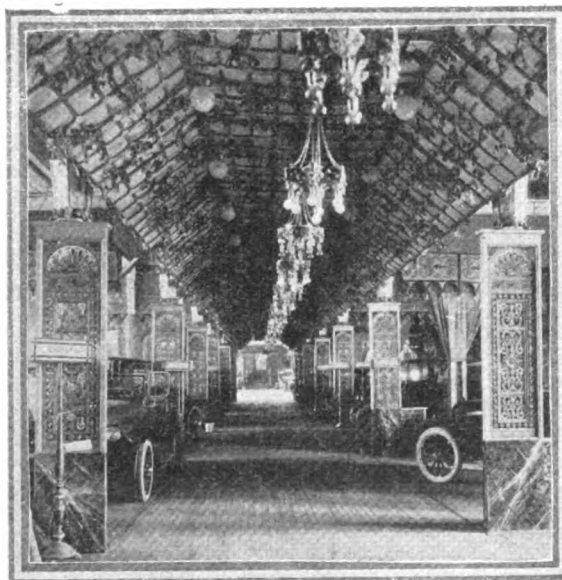
It is of more than passing interest to follow the trend of thought developed at this season's shows. New York and Chicago were large question marks. The atmosphere of these great opening expositions seemed to be one of interrogation.

"What do YOU think?" swept down the line of distribution and back again to the fountains of production. Everybody's ear was to the ground, his finger to the country's buying pulse.

Cleveland was one of the first big dealer shows. There was strong promotion and strong selling effort—and PEO-

PLE BOUGHT CARS. Then came Minneapolis, Kansas City, St. Louis, Des Moines. In each the fire of selling enthusiasm burned stronger and stronger.

The Avenue De Luxe



Visitors entering the Boston Show got a wonderfully pleasant first impression as they walked down this beautiful arcade leading to the main exhibition hall

For years Boston has been one of the country's great selling shows, and coming again this year on the very brink of the spring selling season, it seemed most fitting that here the idea should reach the point of crystallization—here, at the close of a show season that has been notable for its effectiveness in reawakening the selling conscience of the industry.

CAN SELL—WE ARE SELLING, the chorus had the mighty volume of nationwide accord: "*Selling IS Selling.*"

But at the Boston show there were to be found definite thoughts as to how selling **MUST** sell. Throughout the show season the industry had watched the development of the idea that it is on the threshold of a great merchandising era. And with this came the keen desire, expressed by dealer, distributor and maker alike, for the development of automotive merchandising on the highly specialized and scientifically directed plane reached by some of the great national distributors. On all sides one heard "contractual relations," "territorial analysis," "service," "delivery schedules," "creating demand," "dealer financing," etc. It indicated that in all lines of the industry men were thinking about the fundamentals upon which intensified merchandising must rest. They were thinking about next year and ten years hence—charting a course.

The factory representatives were there with definite plans for assistance in merchandising their products—better qualify that, many of them were. Distributors were dividing selling districts, concentrating sales effort. Dealers were analyzing territories, building vocational files, strengthening service facilities—and all with the one big idea—the putting of merchandising on a scientific intensified basis.

Boston, with other parts of the country, was thinking these things, and to some extent practicing them even before the great auditorium, with 105,000

Louder grew the cry: "Back to Selling."

Following these were the shows of the Pacific Coast and the Southwest, and the South Atlantic States. And out of these rose the cry: "Selling Will Sell."

And so when Boston, always a strong merchandising event, burst the bonds of conservatism and came in shouting "WE

feet of display space, was opened to the public last Saturday. Under the public reaction to their strong merchandising efforts the dealers—many of them—had been reaping the reward in steadily increasing sales. So it was not surprising to the show management when, on the opening day, they were requested by the Boston police to throw open the exposition fifteen minutes before schedule to relieve the congestion about the show building.

Of course, the open winter, early spring, reduced financial pressure, and other elements had entered into the situation to some extent—but above all, the dealers knew that the intense public interest was due to the constructive sales effort that had been carried into the New England territory—partly through small shows—in the weeks just preceding the Boston opening.

So when the Boston show opened, Boston dealers were actually selling. The volume was estimated at more than 50 per cent of the abnormal 1920 volume. Estimates placed the stocked cars in the territory at 8000, considered to be scarcely a month's supply under the existing selling impetus.

There were many dealers who predicted, if not actual shortage, at least two or three weeks deferred deliveries in May and June under present factory production expectation.

Cars were selling all along the line, with the proportionate volume considerably greater in the price classes above \$1,500. Trucks were selling, but slowly, the best results showing in organizations where sales effort was being applied strongly in vocational lines where spring and summer demand might be expected. Accessories and tires showed a marked increase during the past six weeks, but with the dealers buying in smaller lots. Accessory prices were reported approximately 25 per cent lower than last year.

Used cars were showing surprisingly good sales, with prices holding up remarkably. The encouraging condition of this market was laid to the selling pressure exerted by new car dealers as a means of clearing the way for new car handling, and the capitalization of the spring shortage idea by the used car dealers. One Boston paper last Sunday carried nearly a column of classified ads of persons wanting to buy used cars of all descriptions. Inquiries at the booths where tractors and their accompanying farm implements were shown indicated a fairly good spring demand for these products, and there were some sales of Cletracs and tractors of that type to contractors and to some municipalities for road work.

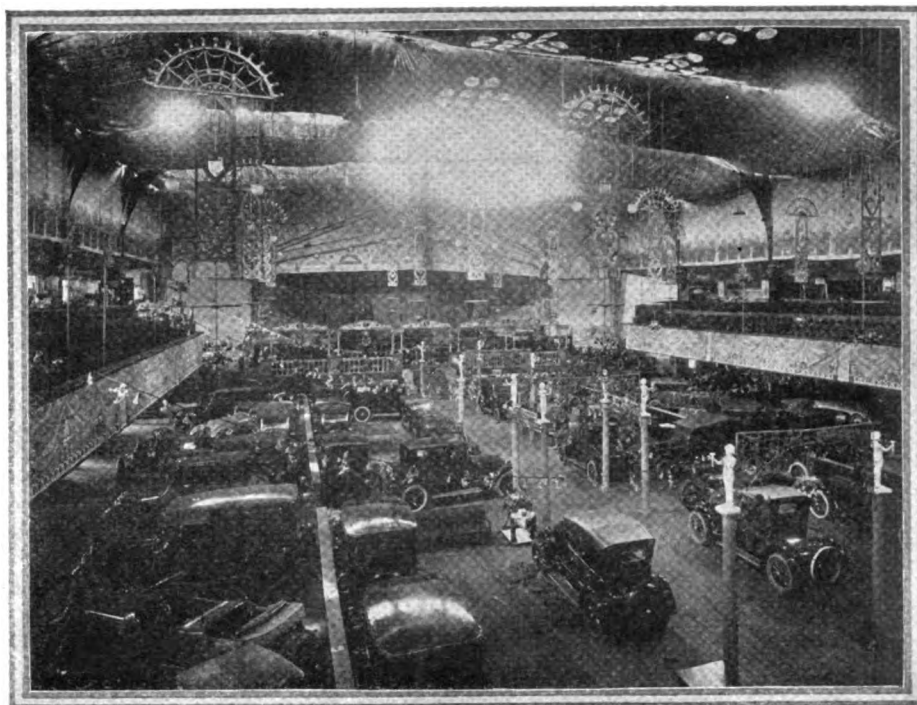
The Boston show, as an exposition, was greater and grander than ever. To begin with, there was greater promotion—more money was spent in advertising it throughout the district. The strands of tradition were snapped in many instances. The low hanging apple blossom decorations were discarded for a beautiful cathedral decorative effect in which huge artistic electric chandeliers with vari-colored lights, leaded glass window effects and highly colored panelling predominated. Tradition did, however, des-

ignate the positions of most the exhibits. Trucks and tractors were shown in the basement with considerably more effective display than in the past. Six ladies' orchestras entertained the visit-

Building. The accessory displays occupied the upper floors and balconies, sharing them with cars.

On the whole, the individual exhibits were well arranged, with some indica-

The Main Exposition Hall at Boston



The main exhibit in the Boston Show presented a beautiful cathedral effect. Great chandeliers with vari-colored lights were reflected in the polished surfaces of the cars, greatly enhancing the exhibits

ors. These were mostly hidden in palm bowers in the balconies of the exposition halls of the historic old Mechanics

Down the Main Aisle



Chester I. Campbell, Boston's veteran show manager, is strong on effects like this. His Avenue De Luxe has been the talk of the industry. This main aisle led to the stage in the main exposition hall.

tions of crowding, a condition difficult to prevent in a show where demands for exhibition spaces exceeded the space available by more than 200.

Several of the booths made striking displays. Buick, for instance, attracted large crowds with a sport model under a blue plush canopy and surrounded by a brass rail, which revolved slowly on a turntable hidden by a flower bed. A small negro boy in vivid red bell-boy suit sat at the wheel.

Lafayette showed a beautiful nicked chassis that brought out strongly the clean character of its engine and chassis construction. Pierce-Arrow showed a light green roadster with lobster red leather upholstery and disappearing top. Lexington's canary birds in artistic wicker cages warbled to the passing throngs. Paige had Ralph Mulford there with a car with a speed record, and Velie showed a cut-away car that showed not only engine and chassis construction, but initiated observers in the mysteries of body construction, upholstery, paint and other developments of the finished product.

Coming so late in the season, Boston, naturally, boasted of few new products. Wills-Sainte Claire was there in a prominent space, and also on Boston's "Billion Dollar Row" in a beautiful big salesroom. Several new cars, however, made their first Boston bow, including Dixie Flyer, Dorris, DuPont, Gardner, Hanson, Kelsey and Handley-Knight.

In the truck section, the newcomers included Facto and Ajax. The Facto model shown was a 2½ tonner with standard units. A merchandising plan, embracing a factory to user arrangement, was announced at the show.

Alfred Reeves, general manager of the N. A. C. C., and Harry Moock, general manager of the N. A. D. A., were the principal speakers at the big "Pep" meeting of New England territory dealers in Boston Tuesday night, which was held under the auspices of the Boston Automobile Dealers Association, sponsors of the show.

Under the same auspices the Boston Salon, in the Copley-Plaza Hotel, was opened Tuesday with a striking display of domestic and European quality jobs.

The collection attracted large patronage and introduced in Boston the post-war Mercedes. Among the other cars shown were Rolls-Royce, Northway, Fiat, Kenworthy, Hudson, Marmon, Pierce-Arrow, Lafayette, Stutz, Macfarlan, Daniels, Sunbeam, Lincoln, Packard, Cadillac, Apperson and Franklin. Many luxurious body jobs were shown, including several exhibits from the Portsmouth Auto Body Co., on Cadillac chassis.

There was the usual round of dealer meetings and dinners at which factory representatives told dealers of the production plans for 1921 and gave them many new ideas for merchandising their products. The outstanding feature of most of these meetings was the evidence

of stronger factory interest in dealer problems and means of overcoming them.

In Boston the industry read the final chapter of the 1921 "Back to Selling" romance. It found there the final push that sent gloom and sales resistance overboard under the compelling weight of sales stimulation generated by the spring shows. Detroit, Denver, Seattle and several smaller centers are still to be heard from, and they like their predecessors are expected to add momentum to the selling season and hasten the arrival of the new merchandising era in which cars, trucks, tractors and all other automotive products will be distributed on a higher selling plane than ever before reached.

Boston had SOME show, and the industry—some TEA PARTY.

Omaha Show Reveals

Strong Optimism in Middle West

Revival of Buying Interest and Improved Sales Indicate a Speedy Return to Conditions Approaching Normal—Much Encouragement for Dealers in Big Buying Crowds

OMAHA, March 17.

OMAHA and the Middle West have not grown stagnant in automobile and automobile accessory sales.

This was evidenced by the interest shown in the Sixteenth Annual Automobile Show held in the Omaha Municipal Auditorium, March 14-19. The sales made at this year's show far surpassed those of any show held in Omaha. The entire community seemed to breathe a spirit of optimism and prosperity.

The motor show has been an eye-opener, not only to automobile men but to business men of the Middle West as well. Who would have thought that a show during this winter of uncertainty would beat all records of attendance? Who would have dreamed that thousands of persons, day after day, would pay admission to see something they wanted to buy? Certainly not the dealers themselves. Business has been poor. Would the people come?

Here is what happened. The exhibition floors were swamped. People crowded in the auditorium until they could scarcely move. The records of sixteen years were smashed. Even at the height of the buying frenzy of last year there were no such throngs; and it was not a window shopping throng. It was a BUYING crowd. Dealers who hadn't a real customer in weeks suddenly began getting orders. People had the money, and were ready and waiting to buy when they found just what they wanted. There is not a headache to-day among the automobile dealers of Omaha. They have tangible assurance of the beginning of that return to normalcy that

everybody in the industry has been looking for.

Thirty-seven display booths for passenger cars and seventeen display booths for trucks kept the attention of the visitors. The building was beautifully decorated.

Decorations this year were much more elaborate than in former years. The electrical lighting for the great auditorium was supplied by seven great chandeliers in which were placed thousands of electric lights. The great stage carried a canopy effect, curtain strung with thousands of vari-colored lights. Powell, manager of the show, states that the electrical effects alone represent an outlay of \$4,500.

The thousands of persons who attended the show left with the feeling that they had received a great lesson in beauty and optimism. At all times during the week of the show the crowds were entertained with music from several orchestras, and at every theater of the city special programs were arranged for the hundreds of dealers and automobile men, and prospective buyers from the great Middle West. It has been a great week in Omaha, and one that has been of great benefit to the entire city.

As to an analysis of the automotive industry in Omaha, prominent automobile men in supplying figures say that each year the figures of sales are mounting upward and onward. The past few months have been quiet ones in automobile trade circles, and yet a glance at the figures for the year shows what a big market for automobiles and accessories Omaha has become.

The fact that the Omaha show was

held so late this year was due to two things. With a late show it was thought possible for dealers to display the very latest spring models of the different cars, and with the warm weather at hand it is the start of the real buying season. Consequently, it was of mutual advantage to the car owner to buy, and to the hundreds of visiting dealers and manufacturers.

The Omaha automobile show was staged by the Omaha Automobile Trades Association. In the earlier days the show was practically the only work of the association, but during the last few years it has been working more and more for the good of the industry in the Middle West.

Last year a new position was created, that of commissioner, and A. B. Waugh was appointed to fill it. He is devoting his whole time to it, watching legislation, boosting movements in the interest of the industry, etc. The membership was greatly increased by opening the association to associate members, practically all of the garage men of the city becoming affiliated with the association.

A large share of the credit for the show's success goes to Clarge G. Powell, secretary of the association, who has managed every one of the sixteen shows held in Omaha. He has gone into the work of promoting the show, and instilling interest in dealers and buyers, with his whole spirit and industry, and he has done much for the automotive industry of the Middle West. Other officers of the association are J. T. Stewart, president; Guy L. Smith, vice-president; Lee Huff and John Oppen, directors.



Beautiful Decorations at Newark

The Newark show this year was particularly pretty. A handsome ceiling effect and a particularly neat floor job offered effective display surroundings for the cars and trucks. Accessories occupied the balcony

Newark Show a Big Selling Event

New Jersey Metropolis Center of Large Gathering of Dealers and Prospects This Week

NEWARK, March 18. **R**EAL buying interest is in evidence at Newark's Thirteenth Annual Automobile Show, which is being held all this week in the First Regiment Armory. The attendance is running considerably ahead of previous years, and the visitors belong as a rule to the class that the automobile dealer is particularly desirous of reaching. There is a pretty general feeling among the exhibitors that there are a great many people who desire and need cars, and who have the money to buy them, but who have been holding off. These people are coming into the market, and the show is an important factor in hastening their return.

Newspaper advertising has played an important part in maintaining and creating interest in the automobile, and in drawing crowds to this show. A preliminary advertising campaign featuring the utility of the automobile, which was similar in many details to that used in Detroit, was put on during the winter. As the date of the show approached and all during the week, the show management has carried space in the local dailies. The copy used during the current week featured the fact that the exhibition was being held for the convenience of the public, and that an opportunity was offered to inspect and compare the various makes under one roof. It also sounded a note of warning that there was every likelihood that there would be a car shortage in the very near future.

The armory was beautifully decorated and well lighted. The hanging chandeliers were primarily for decorative purposes. The exhibits were illuminated by lines of electric lights suspended from cables which extended from balcony to balcony. These cables were spaced about 25 feet apart. The many lights util-

ized in this manner provided a very nearly uniform illumination of sufficient intensity to permit of close inspection of any of the details of the various cars.

As in other years, the show management is handicapped by the lack of a suitable building. The armory is too small to house the exhibits of all the dealers in a city of this size. Under the conditions, the show was a very creditable exhibition, although with the limited space available the dealers were not able to make as good a display as they would have liked to.

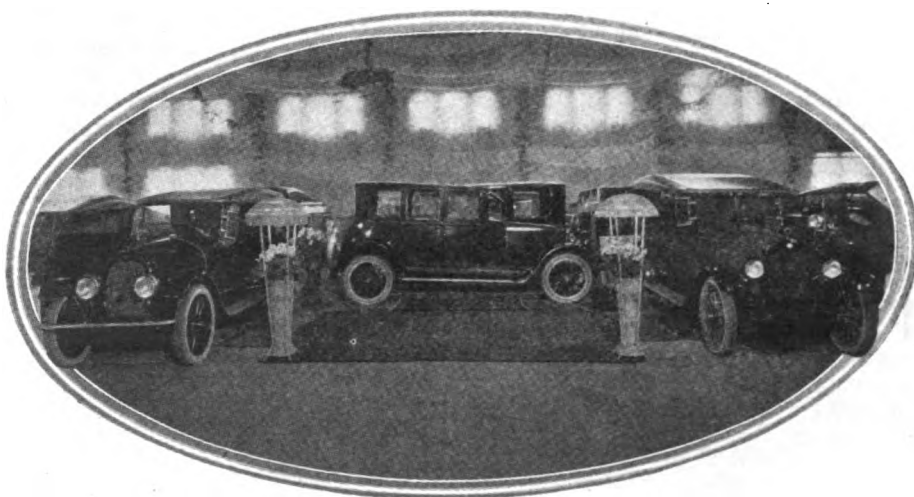
The most striking display at the show was a gilded Chalmers touring car, which was mounted on a platform in the center of the exhibit. Gold leaf was

applied to the entire body and every portion of the original paint was completely concealed.

There was considerable buying at the show, and the dealers are very much pleased with the large numbers of live prospects obtained. One dealer in the \$3,000 class reported twelve sales, and a salesman selling a \$1,500 car stated that he had obtained five orders at the show.

As usual, Claude Holgate was at the helm, and the success of the show is in a large measure due to his hustling personality. Credit is due him for the promotion work that has attracted the crowds, and also for the beauty of the decorations. He's a real show manager.

A Prize Show Exhibit



This display of Apperson cars made by the Syracuse Sales Co., Apperson dealer, was awarded the prize offered at the Syracuse show

TO SELL RIGHT NOW—

4 Pages Telling How 4 Dealers Are Doing It

Motor World
Feb. 23

The Selling Creed and Some Dealers Who Are Practicing It

This Issue

To Sell RIGHT NOW—

EVERYBODY MUST

- 1.—Quit agreeing and sympathizing with the "hard times" owners. Talk fairly in the future of this great country of ours and every town in it.

THE DISTRIBUTOR MUST

- 1.—Maintain closer contact than ever with his dealer organization.
- 2.—Hold instruction meetings to see that his travelers know every important detail of the products they sell, and to detect and correct pessimism among his travelers, whether originating with them or absorbed from dealers.
- 3.—Assist dealers in organizing system and accounting, so that there will be no repetition of last year's losses through accounts improperly secured.
- 4.—Go intimately into dealers' advertising and selling problems and help solve them.

THE DEALER MUST

- 1.—Call a halt on unpromisable

trades. Better no sale than a sale at a loss.

- 2.—Install a bookkeeping system, if he has none, put the system into proper working order if he has one that has been allowed to run down.
- 3.—Advertise only in mediums that are read by the people he ~~can~~ sell to.
- 4.—Offer and claim for his selling force only **SALESMEN**—men with power to change people's minds.
- 5.—Secure the closest possible contact with his sales force through individual and collective meetings.
- 6.—Eliminate every source of pessimistic information. Keep a prospect list "thinned" up to date all the time, **COVENANT** prospects as long as they are "alive" and stop wasting time on them when they are "dead."
- 7.—Assure his salesmen an income—the man who is broke can't talk against pessimism—but make sales the means

using wick of their income.

- 8.—Keep his salesmen everlastingly on the go. Refuse to a minimum the time required for slow work, preparing reports and all kinds of waste effort.
- 9.—Demonstrate his product, whether it be car, truck or tractor, and advertise demonstrations in the **underground** way.
- 10.—Sell a product that fits the prospect's needs, provide service and so sell it that satisfaction will prepare the ground for readers.
- 11.—**KNOW** his product in every detail and see that the salesmen know it.
- 12.—Remember that no economist and no preacher in any profession is going to tell the people what they want or what they should have. Find people with power to buy who want or need his product or who can be persuaded that they want it or need it—**AND THEN SELL.**

1

How to get salesmen and train them -- How a Buffalo truck dealer does it.

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How to educate a sales force on the fine points of selling -- How a Baltimore car dealer does it.

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How to get prospects to send their names in to you -- How a Kansas City dealer does it.

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How to keep a prospect list up to date and advertise at the same time. How a Camden, N.J., dealer does it.

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1—How to Get Salesmen and Train Them

How a Buffalo Truck Dealer Does It

IN this story you are going to read that—

- 1.—Motor truck salesmen are made—not born.
- 2.—Truck salesmen can be obtained by watching the classified ads for men trying to better their positions and by inserting ads for salesmen.
- 3.—The applicants who seem to fear they may fail usually turn out better than the cocksure ones—they are more willing to learn and easier to teach.
- 4.—The man who knows people can sell more

EVERY once in a while—sometimes twice in a while, you hear some one say 'He's a natural born truck salesman,' but take it from me there is no such thing. Truck salesmen are made—I was going to add, not born, but, of course, they have to go through the operation of being ushered into this world."

So says William J. Male of the Male Motor Truck Co., Inc., Stewart dealer in Buffalo.

And but before this story goes any further it may be well to say that the Male company has developed many effective truck salesmen, and that the conversion of these business-getters from the raw material to the finished article has been carried on, very largely, by Male, himself, who is a sort of a walking encyclopedia on truck salesmanship of the kind that brings home the bacon.

"The main trouble, to begin the story

trucks than the man who merely knows trucks mechanically.

- 5.—There are four essentials in training men to sell trucks: Selling the truck, keeping it sold until delivery, making proper delivery and getting the money for it.
- 6.—The salesman should be thoroughly conversant with the prospect's truck needs before approaching him.
- 7.—The good will of a truck driver is more essential than the good will of the owner.

at this end," says Male, "is that when one gets a salesman trained to the 'nth' degree of efficiency, someone who has not had the ability nor patience to change the rough stone into the finished gem, comes along and offers him a salary that we can't pay and he can't resist, and away he goes. But they don't all go. We always have enough around here to keep things moving."

"But how do you get the raw mate-

rial, the uncut stones?" he was asked.

"Mostly by watching the classified ads in the newspapers. We are always on the lookout for young men who are working, but who advertise for other jobs because they want to better themselves.

"Then, we advertise, ourselves, in the classified departments for salesmen. We put in blind advertisements. We say in these that a prominent truck-selling concern is in need of more salesmen, and is willing to pay good money to applicants who make good. No experience necessary. And when they come in we size them up. I find I like the rather timid ones better; those who are fearful they may fail. They usually turn out better than the cocksure ones, and, besides, the timid ones are usually more willing to learn and easier to teach.

"When we get them in here, the first thing we drill into them is that mechanical knowledge of a truck is not essential to selling that truck. We drive it home to them that the man who knows people can sell ever and ever so many more trucks than the man who merely knows a truck mechanically from A to Z. Of course, the salesman should be able to tell how many cylinders the truck has and what its principal features, mechanically, are, but he doesn't have to explain to prospective buyers the technical niceties of its mechanism.

"There are four things essential in the sale of a truck which I teach our sales pupils. First, selling the truck; second keeping it sold until delivery; third, making proper delivery of it and fourth, getting the pay for it without offending its owner.

"I try to impress on sales pupils that the best way to convert a prospect into a buyer is to become conversant with his truck needs before approaching him. This can be done by finding out what kind of truck size and body will best answer his requirements. This may be ascertained by talking with his employees, and by having conversations with men, working for his competitors, finding out from them what kind of bodies their employers are using, and whether they best meet the needs of the business they are in.

"When the salesman has picked up this and other information, then it is time for him to approach the buyer and point out to him how a truck, with a body such as the salesman suggests, will facilitate the conduct of his business.

"The truck is sold—now to keep it sold until delivery to prevent cancellation of the order which has been obtained with so much labor. This sometimes requires as much tact and patience as selling the truck. Rival salesman are likely to hear that the order has been placed, and, in that event, to do all they can to induce the buyer to change his mind and switch to their trucks.

"Next, if the order stands, comes the proper delivery of the truck, which means placing in the buyer's hands just the truck he had in mind when he ordered. To do that it is frequently necessary, as I point out to salesmen, when training them, to use a sort of sixth sense at the time when the order for the

truck is taken. The salesman has to go by what the buyer says and by what he doesn't say—when he is placing the order. And if he dopes out what the buyer thinks, as well as what he says, he is



The man who knows people can sell more trucks than the man who merely knows trucks mechanically

able to make, later, what I call proper delivery, which means to deliver to the buyer just the truck the man had in his mind when he placed the order.

"Then, as to getting the pay. The truck isn't sold, the salesman's work is not finished until the payment for the truck has been made. Our sales pupils

are instructed to exercise the same tact in securing payment as is used in getting the order, and in following that order through to culmination. They are instructed that the customer is never to be given the impression that it is his money we are after, and every effort is made to impress on him that our main desire is to please and satisfy him, and that the money end of the transaction is a minor consideration.

"Especially do we seek the good will of the drivers of trucks. They are the boys whose friendship is valuable. They are the lads who can make or break a truck dealer. I wonder if the average dealer knows what an asset it is to have thousands of drivers saying good words about his truck, no matter what trucks they may be driving. All we do to get and retain their good will is to treat them like regular fellows. When they come in here for repairs we realize that it is important that they get back on the job as soon as possible, and we help them to get back as soon as that by doing the work they want done in the least possible time and in the best possible manner. They know they are privileged to use this plant as if it were a clubhouse. If they want to use tools the tools are here to use. It's make yourself at home, boys; what's ours is yours.

"The good will of a truck driver is more essential to the truck seller than the good will of the truck owner. The average truck owner's opinion of his truck rests on what this driver tells him about it."

2—How to Educate a Sales Force

How a Baltimore Car Dealer Does It

IN this story you are going to read—

- 1.—How to secure the prospect's undivided attention.
- 2.—How to sustain attention and develop it into interest.
- 3.—How to foster interest to ripen into desire.
- 4.—How to remove doubts from the prospect's mind and implant there an impelling desire to buy.

THE confident man with a mission is known the moment he steps into a room—he is the man who sells.

So says E. T. Backus, head of the Backus Motor Co., Ford dealer in Baltimore, who has developed a complete course of instruction to improve the ability and earning power of his salesmen.

Backus' selling creed is best told in his own words as they are found on the typewritten assistance sheets given members of his staff:

1—DEFINITION OF A SALE:

To sell is to transfer property to another or to contract so to do, for a valuable consideration, especially money.

A true sale is one in which there is a profit three ways; to the house, the buyer, and to the seller.

The profit to the buyer means that it is poor business to sell anyone anything

that he can not use to advantage. Such a sale does no permanent good to the salesman nor to his house.

2—DEVELOPMENTS OF A SALE:

There are four distinct developments in the selling process:

- a.—Salesman must secure prospect's undivided attention.
- b.—This attention must be sustained and developed into interest.
- c.—This interest must be ripened into desire.
- d.—All doubts must be removed from the prospect's mind and there must be implanted there an impelling resolution to buy; in other words, the sale must be closed.
- e.—In a successful sale there must be confidence. Unlike the other four elements of a sale confidence doesn't develop into a stage of the

process. It's a slender thread which begins in the early part of the interview and widens to a broad stream on which both minds meet and move towards the completed sale.

3—APPROACH

Before a sale is possible, the buyer must be approached, therefore the approach is a necessary and difficult preliminary of the selling process.

It is divided into two parts.

- a—Preparation for the interview by securing knowledge of the prospect.
- b—Getting in to see the prospect.

Keeping these elements in mind is necessary to an intelligent study of salesmanship. It is even more important to the actual making of the sale.

4—PREPARATION FOR THE INTERVIEW

Interviews are often opened by approaching a prospect on his "blind side." That is, by talking to him of something in which he is deeply interested. Don't use a standard presentation, modify it or add to it so as to tie his proposition closely to the prospect's interests. In other words, suit your talk to the prospect.

To do this, salesman must know as much as possible about the prospect before approaching him. Often a great part of his knowledge must be secured by scrutinizing his man as he crosses the office floor. Knowledge is gained sometimes by getting prospects to talk.

The real salesman gathers valuable information before he ever faces his prospect. Find out prospect's pet hobby. Do not use it openly but draw it out by having prospect tell it to you. You create interest at once by touching something close to the prospect's heart.

Be continually on the lookout to get a favorable opening.

5—GETTING TO SEE THE BUYER

Salesmen sometimes conjure in their mind's eye difficulties of getting in which do not exist. Do not recognize the possibility of any difficulty in this connection until it actually arises.

- a—Realize that interviews during a day make great inroads on a business man's time. Therefore they hedge themselves with guards of one kind or another against those who would intrude on their time.



The salesman must obtain the undivided attention of his prospect

This does not indicate that they have no desire to look at worthwhile propositions.

- b—A salesman big enough and who has a worthy proposition is expected to be ingenious enough to make his way past obstacles.

6—TACTICS TO BE AVOIDED

- a—When getting men out of meetings to see you, your message should be of importance otherwise man would resent the occurrence so much that it would be impossible to do business with him.
- b—Avoid the overworked "Personal Matter." No matter is personal from the point of view of the prospective purchaser.
- c—As a usual thing it is unwise to send in a business card by a boy or telephone operator to phone it because the mind is adverse to con-

sidering any subject unless there is something of personal interest in it. A card has little to arouse a healthy curiosity.

7—ATTENTION—ITS NATURE

The mind is under a bombardment of ideas, all trying to make an impression on it.

People around a prospect, ideas that he has in mind to work out, the train of thought started by some object on which his vision rests, his morning mail, papers on his desk, his telephone, all clamor for his attention. The prospect does not sit around with his mind a blank waiting for some one to capture his attention without a struggle. The salesman enters a field already well occupied and must fight for undivided attention to make a sale. Therefore, he must by his personality, his proposition, especially by his opening remarks, eliminate all competitors for that attention and hold the field alone.

If prospect is too busy to see you, make a definite appointment, call again. Avoid being put off with mere excuses as salesman should be convinced that prospect is sincere. Do not stand waiting for any length of time where the prospect may be disturbed by one's presence; never break in when he is engaged with some one else.

The ideal conditions in securing prospect's attention are to be alone with him, to have him comfortable and to have absolute quiet.

8—CO-OPERATION

Co-operation is very valuable to salesmen; co-operation to customers, friends, and other salesmen. It is especially valuable in the matter of interviews. It makes the securing of the interview a simple matter even with those hard to see because the prospect out of courtesy to a friend will hear out your whole story. The fact that he has recommended you has given him confidence in you. These, of course, are the lines of least resistance.

Secure names of prospects from other salesmen in other lines; or, better still, a letter of introduction.

3—How to Get Your Prospects to Send Their Names in to You

How a Kansas City Dealer Does It

IN Kansas City R. P. Rice has invented something new. His plan takes from the shoulders of the salesmen the necessity for finding real prospects; it provides the salesmen an opening in talking with prospects that avoids chance for a direct "No" on the question of the prospect's expectation of buying a car this year; and it helps the prospects to save money to apply towards purchase, if they later decide that this is their year to buy a car.

ONE Thursday morning R. P. Rice put some literature in the mails.

The next Wednesday morning Rice's salesmen had more live prospects than they could handle—prospects who had said they wanted to make arrangements at once to buy cars.

And these people have said they want the Rice salesmen to help them assure themselves of getting a motor car this year—in 1921!

And there's another side of the pic-

ture: The thousands of people in modest circumstances in Kansas City, who are making up their minds that maybe, after all, they are going to get their car this year! Anyway, they are saying, "We might as well aim at it."

Imagine the hopeful, optimistic thoughts regarding motor car buying that such a situation spreads! In six days the turn has come in the minds of hundreds; in more days it will come in the minds of thousands—*thinking of*

buying cars—not thinking of not buying cars.

What did this bit of literature say that Rice sent out?

It was *not* a special price offer—get that straight first. No price reduction, no premiums, *no lower deposit* on a car bought on time. No bargain about it.

It's important to get this in mind—that the device was not merely for an emergency, to push cars at a price; it is a device that can be used year after year, that Rice is going to use year after

This circular is building business for a Kansas City dealer

year, building sales volume and helping people to get cars.

And it's not a *money-lending* device.

Rice doesn't lend the prospects the money—he has them lend the money to *him*, until enough has been accumulated so that the first payment can be made on a Ford!

Thinking over the problem, Rice decided that two of the factors that depress salesmen and handicap them must be removed: First, the necessity for searching for prospects, and, second, the difficulty of getting the sales interview under way without a positive inclination on the part of the prospect toward immediate steps in the direction of owning a car.

But Rice had one other thought on this subject that has the touch of genius in it.

He agreed that these deposits, with accrued interest, would be paid back at any time if the prospect decided that he did not want to buy a car.

The Heart of the Plan

"Hardly anybody is willing to say positively that he will *not* buy a car this year," said Rice. "But most people are uncertain about the future. They don't know what the year will bring them. They want to save their money against all sorts of possible hazards—and yet they do feel that possibly they may be able to buy a car.

"The plan offers them a way to save money—save it to apply toward the purchase of a car if things turn out that way, or save it for some other emergency, if it happens that they decide not to buy."

In putting the plan into operation, one of the obstacles to salesmen's efforts was disposed of entirely—the gathering of prospects' names. *The plan was published on an 8x11 sheet of yellow paper and mailed to every resident of Kansas City.* Mail calls alone in the first few days thereafter provided many prospects' names.

Then a corps of prospect-gatherers was employed, on salary. They are making a house-to-house canvass of the city. They have the names of the residents; they know that each resident has received a copy of the offer. These pros-

The New *Ford* Selling Plan
INAUGURATED BY

R. P. Rice Motor Company
Authorized Sales and Service

3823 Broadway 2 STORES 4th & Minnesota

You Get 6% Interest on Your Money

THIS makes it easy for you to get that Ford car. Under our new plan you have your own time in which to pay for your car, and you buy it at the actual price existing at time of delivery, getting your car the day you want it and drawing six per cent interest on prepayments.

OUR PLAN

You pay \$5 a week—more if you like—on the price of a Ford car, any type. Sedan, Coupe, Truck or Touring, until one-third of the purchase price is paid, drawing 6% interest on every dollar. You can then take your car and have 12 more months to pay the remaining two-thirds. When you get your car, you can draw your interest in cash or let it apply on the purchase price.

Your Money Back on Request, with Accrued Interest, Any Time You Wish, If, for Any Reason, You Do Not Want a Car

Simple, Isn't It? Call us by telephone or drop us a card. Our representative will see you days or evenings, at your office or home, and go over our plan in detail.

R.P. RICE MOTOR COMPANY

3823 Broadway 4th and Minnesota
Phone: Home, Hyde Park 7500 Bell, Westport 1314 Phone: Home, Drexel 1918 Bell, Fairfax 5380

pect gatherers therefore can ask the housewife or the man of the house, "You have read our offer—what do you think

of it?" or some such question—and the interview is promptly under way, with the opportunity for the prospect to say that he doesn't expect to buy a car left in the lurch.

The prospect gatherers do not try to sell cars. They merely discover whether the people visited would like to talk over the offer with a salesman. Both men and women are doing the canvassing, the women proving especially valuable, since many of the calls are made in the day-time.

It is clear that, when a salesman gets a name, he knows that he is going to call on a prospect who is already somewhat inclined to buy a car. And he can put a great deal more enthusiasm into his visit than if he had to build from the ground up and waste time and energy discovering the attitude of the prospect.

Furthermore, these prospect gatherers are already showing signs of developing into salesmen.

"There is only one question we will ask of anybody who wants money back—that is, 'Are you planning to use this money to apply on the purchase of another make of car?' And if an affirmative answer is made, all we will do will be to exert a little more pres-

sure to sell the person a Ford. In any event, we will give the money back, with interest, if the depositor wants it."

4—How a Camden, N. J., Dealer Keeps Up His Prospect List

Check

☐ You have my name and address correct.

☐ You have a mistake in my address. It should be:

Yes, you may send me the Lexington letters for a while. This does not mean I expect to buy a Lexington. But I am willing to hear some more about it, without obligating myself.

☐ Send me the latest Lexington catalog, without obligation.

☐ I would like to have, without obligation, a demonstration of the Ansted Engine in the Lexington car. I would like to ride behind the motor you say is so wonderful.

Signature _____

THIS is a story about a novel way to recheck a prospect list and advertise at the same time. The Camden, N. J., Lexington dealer is sending out 2000 return post cards like that at the left.

HEIMBACH & BRINKMAN, 325 Market Street, Camden, N. J., Lexington dealer, is doing some combined "missionary" advertising and re-checking of the prospect list. The plan is as follows:

The firm is sending out 2000 return post cards, one-half of the card being straight advertising, while the return half, with perforations to make its detachment easy, is shown in the accompanying cut.

The effect of this return post card is to straighten out the prospect list by correction of addresses, so that there will be no waste effort and postage; to present the claims of the Lexington car in a new way, and to learn directly what prospects are immediately interested and to what extent.

It has been particularly effective in furnishing live prospects and reviving "dead" ones, and the direct cause of several sales.

The letters referred to in the post card are a series of eight which began last October.

THE DEALER CONTRACT

The Trade in Macon, Georgia, Territory Calls on State and National Associations to Lead Demand for Revision of Manufacturer-Dealer Relations

A Resolution:

Adopted by the automobile dealers of Macon territory in conference March 1, 1921, Macon, Ga.

WHEREAS, a contract between two parties is defined as an instrument of mutual advantage coupled with mutual obligation and is binding upon both parties concerned; and

Whereas, the so-called contract under which dealers in automobiles operate and for years have been operating is drawn in arbitrary form, generally similar in all cases, said form being dictated by the manufacturers of automobiles for the absolute protection of their own rights and interests and with but slight regard for the interests of dealers; and

Whereas, said so-called contract has been useful as a working agreement solely, in other times and under other conditions; and

Whereas, the definite partiality of said so-called contract toward the interests of the manufacturers has occasioned great losses in the past and in part is responsible for the high mortality rate that has prevailed in the business of retailing automobiles; and

Whereas, the marketing of automobiles must be conducted now under new conditions that seem to promise permanency; and

Whereas, it is essential for the future of the automobile industry and the automobile business and for the best interests of manufacturer, dealer, owner, that retail dealers in automobiles be permitted and encouraged to operate and build upon a firmer, sounder, surer and more permanent basis than they ever have known before;

THEREFORE, be it resolved, by the automobile dealers of the following counties of Georgia, to wit—Bibb, Jones, Crawford, Upson, Pike, Monroe, Butts, Jasper, Putnam, Baldwin, Washington, Wilkinson, Laurens, Twiggs, Bleckley, Dodge, Pulaski, Houston, Macon and Spalding, in meeting assembled at Macon, Ga., this the first day of March, 1921—

(1) That the inadequacy of the present form of dealer-contract, and its obvious one-sidedness and unfairness to the dealer, be cited to the careful consideration of the Georgia Automobile Dealers Association with the recommendation that the Georgia association call upon the National Automobile Dealers Association to lead a national demand in behalf of dealers that their contracts be revised and made uniform by a committee representing dealers and manufacturers, said revision to provide:

(a) For contracts of perpetual duration, i.e., automatically renewed annually on the basis of faithful performance.

(b) For contracts binding upon both parties, whether the manufacturer be one of the parties directly or through a distributor.

(c) For termination and cancellation of contract upon just cause only.

(d) For concession of the right to the dealer to order and receive automobiles as he needs them only, and to refuse acceptance of all automobiles not so ordered by him.

(e) For a cessation of the practice of manufacturers requiring dealers to put up deposits.

Be it further resolved, that the automobile dealers of the aforesaid counties of Georgia pledge their sincere aid and co-operation to the Georgia Automobile Dealers' Association in its efforts in their behalf.

Be it further resolved, that automobile dealers throughout Georgia and the remainder of the country be urged to organize and support their organizations in a determined effort to end the conditions under which the automobile business perforce has been conducted, and to change and improve them to conform with the opportunities and necessities of the present and future; and

Be it further resolved, that copies of these resolutions be furnished to the daily press and to all automobile trade periodicals.

YOUR OPINION, PLEASE!

In order that the greatest amount of information concerning the dealer's contract may be assembled, Motor World requests dealers and dealer associations to forward their views on the subject at once.

In gathering this information Motor World realizes that those dealers who express opinions do so in the confidence that their names will not be used and this confidence will be fully respected.

Human Squeaks

The Man with 'Em Is About as Useless as the Car That Has 'Em

By RAY W. SHERMAN

HOW come? How come?" jovially asked Reilly, as Henry Bennett, the Redman dealer, appeared at the door of the Sennett dealer's office.

"How come?" Henry repeated. "Come so."

"Selling any?" asked the little bald-pated gentleman who scattered Sennetts in and about Callawassa.

"Some. Picking up." Henry fished around under the mail until he found the cigarettes and then fished through his pockets until Reilly gave him a match.

"Any country trade?"

"A little—got a new salesman—think he's going to be good—starts off well," puffed Henry.

"Got all the old ones?"

"Most of them," Henry replied.

"Got Honnity yet?"

"No—let him go—or, didn't try to keep him when he started to go," Henry explained. "You know," he continued, with feeling, "there was something funny about that fellow. He was good, he could sell pretty well, he dressed well, and I couldn't find any particular fault with him—but—but I just couldn't stand it to have him around. He got on my nerves."

"How so?"

"Oh!" Henry made a gesture of helplessness to explain. "I don't know. It was a lot of little things. I don't know that I could tell—I—well—for example—if I think hard enough I can think up little things, but I can't mention any single big thing. For example, he seemed to think he was better than the rest of the gang, and he didn't live up to some of the regulations the way the other boys do. That made everybody else sore and disgruntled, and in the long run it created a mild disturbance in the organization. He'd come in when he got ready and go the same, whether he had any good reason or not. We started to hold sales conferences for fifteen minutes the first thing in the morning, and very often he would come strolling in after we had been in session four or five minutes. He never seemed to realize that he was undoing a lot of the work we were trying to do.

"And then," Henry continued, "he was always kidding with the girls in the office. Everybody in an office has to be pleasant, of course, but there is a difference between that normal every-day friendliness and pleasantness between workers and—and—the other kind.

There wasn't anything in particular to which you could take exception, but the countless little things all put together gave me the impression that he did not consider his job a thing for intensive handling. He didn't make a study of it and try to make it pan out to its maximum. I always had a feeling that if it came to a show-down between my interests and his in a business deal, his would come first, no matter what it might mean to me.

"One day, just before he left, we were having a little sales conference and we were trying to work out a plan that would give us better results than we were getting. Now"—and Henry shot the snipe, "we don't pretend to be world-beaters over at our place, but we are pretty well sold on team work, and we believe that an organization that agrees and works on some one plan will get some kind of result even though the plan is not the very best in the world.

"Well, Honnity listened to it for a while and then began to argue. He had a different idea from ours at every point. Most of us were agreed on enough of the points so we could call it a unanimous agreement, but Honnity just aired his adverse views all the way through. He gave a fine exhibition of wet blanket. Of course, a wet blanket is all right once in a while, but it surely put a damper on the enthusiasm of some of the younger lads in the outfit. He"—

"He's full of squeaks," Reilly interrupted.

"Squeaks?" Henry seemed mystified.

"Sure!" Reilly replied. "Squeaks! You'd be surprised, Henry, how much a human being is like a car—in a great many ways. This bird is just like a car—he runs fine, his motor is almost perfect, his paint and finish are wonderful, he's just about one hundred per cent in every particular, but he's so full of squeaks that no one can tolerate him."

"That's it. You said it!" Henry exclaimed. "He's just like a car I sold last spring—and in the end I had to take it back and give the man a new one—and before I got through I persuaded the fac-



tory to take it back, too."

"Some persuader!" laughed Reilly.

"Well, I did," Henry declared. "We spent hours of time on that darned car trying to find the little noises that the owner complained about. We spent three hundred dollars of our own money, and then I told the owner to take a new one and I'd take back the car. Where those squeaks were I don't know. I never did find out. The car's a wonder if the factory can ever find the squeaks, but they'll have to tear it down and put it together again with something in every contact. It's got a jinx."

"And you'd almost have to take Honnity down and put him together again to get the squeaks out," Reilly added. "Some folks are born that way. They seem to be absolutely lacking in the power of introspection. They don't realize that there is such a thing as fitting in. They don't realize that the squeaks in an organization have their origin in the squeaks of individuals and that the persistent squeaker in an organization must sometimes become squeakless or else go off and do his squeaking by himself—on his own time.

"I've known high-priced men who have spoiled their own futures by letting down in little details, by thinking too much of their own rights and not trying to play the organization game, by thinking rules and policies applied to everyone except themselves, and that somehow or other they could ride through in a big way on some grand scheme of their own. They figured they could make a touchdown without playing with the rest of the team—and, Henry, it can't be done. You can't make a man like a car that squeaks, no matter how good it is, and in the end squeaks will kill the best of cars—and men.

"And, Henry, the difference is that a mechanic can take the squeaks out of a car, but the only person who can take the squeaks out of a man is the man himself. And that's that."



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

The Club Breakfast Service Plan

THE successful merchandiser is a man with ideas and the ability to cash in on them.

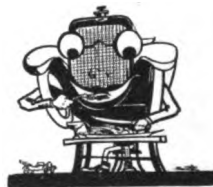
L. G. Reed, a branch manager of the Willys-Overland Co., Inc., Toledo, is cashing in on a service merchandising idea he got in a restaurant during a hurried breakfast. He noted on the menu a club breakfast—a combination of dishes which the restaurant was able to offer at a special price, effecting a material saving to the guest, because the kitchen and the purchasing had been organized to produce certain articles of

food in quantity and naturally at a saving. The development of the idea produced a club breakfast service plan, under which Reed groups three standard overhaul jobs under prices for each model of Overland cars.

For instance, Breakfast No. 1 contains these items: Adjust all brakes; adjust or replace clutch brake and dress up clutch cone; fill and grease car thoroughly; remove carbon; stop motor; flush out and refill radiator; free up and adjust steering gear; align wheels; tighten hound and truss rods; adjust speed control rod; tighten all shackle and body bolts.

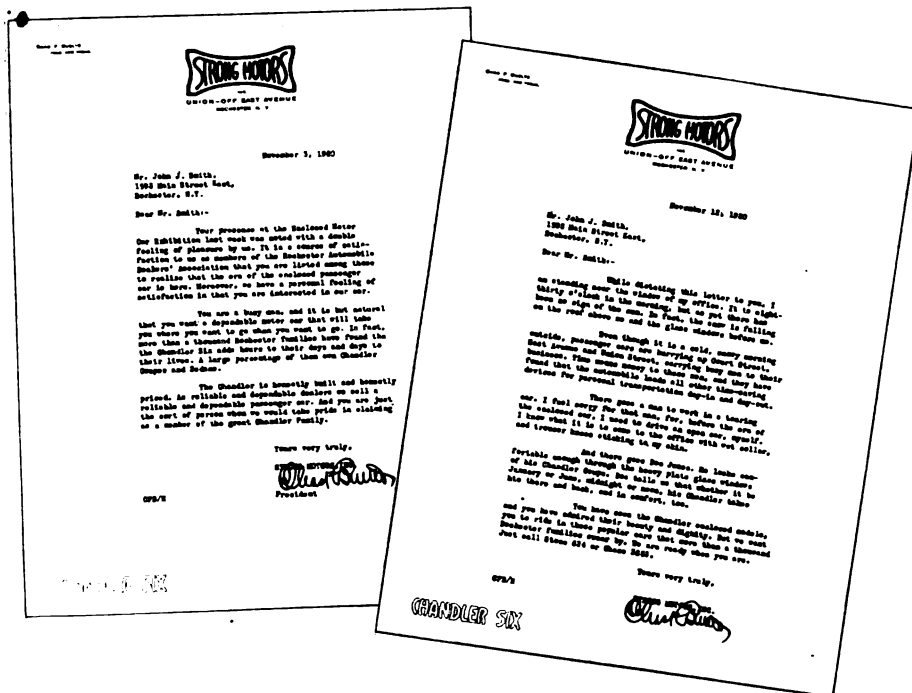
Club Breakfast No. 2 adds certain

Buy Your Car A Club Breakfast



WILLYS-OVERLAND, INC.
14th & ADAMS STREETS
Toledo, Ohio

Real Human Sales Letters



Comfort and convenience can be made strong factors in creating the desire to own an enclosed car. Strong Motors, Chandler dealer in Rochester, N. Y., makes the appeal particularly strong with letters that get out of the rut of the ordinary circular class and talk to the prospect in a real human way. The ones shown here are typical. They were used as a part of Strong Motors follow-up at the recent Rochester enclosed car exhibit

items which make the service job more complete and the No. 3 Breakfast adds still more. As a means of price comparison it may be noted that Club Breakfast No. 1 on Model 4 costs \$33.00; for No. 2 breakfast \$89.00 and No. 3, \$167.

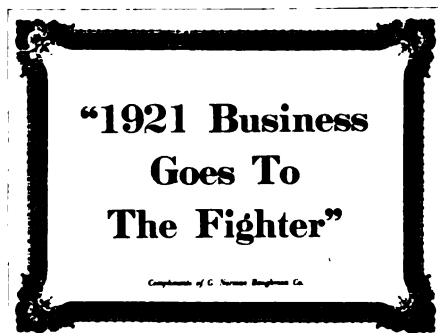
Reed's new service merchandising idea is sold to owners through a special "Menu" circular, the first page of which contains this line, "BUY YOUR CAR A CLUB BREAKFAST." On another page the service selling effort is sold in this way, "A CLUB BREAKFAST—We have applied exactly the same principle to our business and from the statistics covering a period of four years, we have made up three club breakfasts for your car. Each club breakfast varies in amount of work done on the car because we know that owing to the strenuous service to which some cars are subjected, they require more work when it comes to an overhaul; however, if you are contemplating any sort of an overhaul for cars during the winter you would do well to collect one of the Club Breakfasts listed herewith. For an owner the Club Breakfast price is considerably lower than our piece work rate for the same work. **WE HAVE ORGANIZED OUR KITCHEN, BUY YOUR CAR A CLUB BREAKFAST**"

Car Dealer Advertises in Tire Shops

A HARTFORD dealer believes fully in publicity. Aside from advertising in the daily newspapers he utilizes illustrations from his catalogue and displays them in conspicuous places about the tire stations. When a man comes into the station for service he is confronted by the illustration and of course in response to his question the chap is advised that the car is good.

Fight for Business

THE C. Norman Baughman Co., automotive equipment jobber of Tampa, Fla., got some of his dealers out of the dumps by sending them a poster con-



taining the Chicago Tribune's slogan for 1921 business-getters. Baughman asked his dealers to put the slogan up on their walls, to think about it, and practice what it preaches.

Corn Exhibit Proves a Good Will Builder

A CONFERENCE between bankers and farmers of their district at which problems of mutual interest were discussed, was the feature of the annual Corn Exhibit and Contest, held early in December, by Dunlap Motor Co., Ford and Fordson dealer in Ames, Iowa. These annual corn exhibits have done much to establish the Dunlap company with the farmers of their territory. This year more than 200 farmers attended the exhibit and the conference and listened to several well known speakers.

Probably an exhibit of one of the dominant products of a dealer's territory would prove as effective in arousing interest in his product.

The Accessory Merchandiser

Selling Accessories in Rural Districts

RURAL trade is a big item to the automobile accessory dealer. One dealer located in a small town has hit upon a plan that is proving mighty successful in securing this trade. This dealer has compiled a mailing list of all the automobile owners in his territory, together with the make of car owned. Saturday is usually the big day in the rural communities. Farmers come to town on that day to do their shopping, and this dealer takes advantage of this by offering special Saturday inducements.

Spring and summer he holds these special Saturday attractions after supper and terms them "Special After-Supper Attractions," while during the late fall and winter months the farmers come to town in the afternoon and he holds them in the afternoon and terms them "Special Afternoon Attractions." On these occasions special prices are made on certain items of merchandise goods only between the hours mentioned in the advertisement. On various occasions he arranges to have some factory representative present and give talks on some subject that will interest owners, such as "Tire Conservation," "Care of the Automobile," "Engine Troubles and How to Cure Them," etc. Postal cards are mailed to prospects usually three days in advance of the special attraction announcing the program. This idea has proved a remarkable business builder and may be put into use by others with equal success.

Tire Tests Form Basis for Advertising

BOWSER & FAUST, distributors of Victor tires for the Altoona, Pa., territory, has been making tests of its tires on doctors' cars, coal trucks and commercial cars, and using the very favorable results as a topic for adver-

tising in the daily papers. The tires were tested over a six-month period. The doctors' cars were used day in and day out; the coal trucks hauled, of course, heavy loads, many over bad roads; and the other trucks were of the kind that were driven over all kinds of roads all the time by drivers who weren't trying to save tires.

This Helps Give Quick Service

A TIRE dealer has devised a color scheme of claim checks which should prove worth while to other dealers who have experienced any trouble in locating a customer's property when he rushes in for a repaired casing or tube. It's just that little insurance of quick service that has made this dealer the predominating dealer in his vicinity.

Here is their color plan:

White Check—tube only.

Red Check—casing, tube and rim.

Green Check—casing only.

No More Fear of Dark Roads

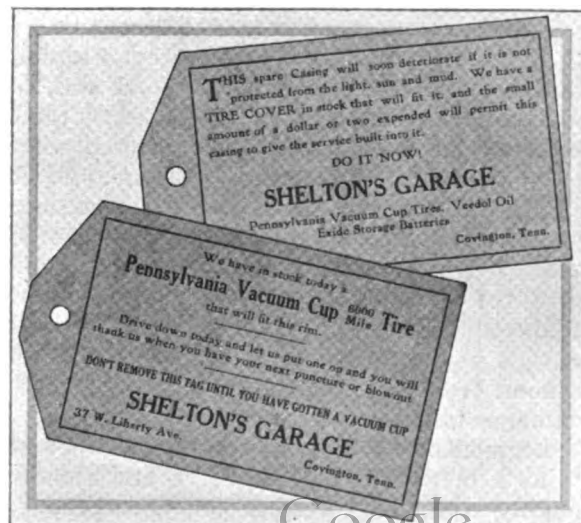
NOW that the dark nights are with us, car owners pay more attention to their lighting problems. With this idea in mind, The Canadian Fairbanks Morse Co., Toronto, had a window exhibit of special lenses for motor car lights. The rear of the show window was devoted to painting of an automobile gliding through a dark country lane at night. The featured lenses were set in the particular part of the painting where the headlight would naturally come. At night the lenses were switched on and off, causing people to stop and investigate.

A Simple Tire Arrangement

THE K. and S. Tire and Rubber Co., Hamilton, Ont., arranged eight tires, one on top of the other, in the middle of the window. At each side was a pyramid formed with inner tubes in cartons and topped off by a kewpie doll.

Tags Help the Garageman Sell Equipment

There is money in the sale of automotive equipment for the garageman who merchandises it in an aggressive manner. The accompanying picture shows how Shelton's Garage, Covington, Tenn., goes after tire sales and service. These tags are tied to the steering wheel of cars in the garage for repairs and parked in and around the street



Editorial Observation

Better Highways and Their Opponents

A LITTLE while ago the head of the State Farmers Association got up in the Missouri Legislature and said that the farmers of his commonwealth expected to depend on dirt roads for the next hundred years. The statement was made in the course of the speaker's opposition to immediate utilization of the Missouri bond issue of \$60,000,000 for improved highways. This farmer proposed taking the bond issue voted for trunk highways which he called "peacock lanes," and dividing it among the counties for building of local roads.

The opposition of this farmer and of others who spoke at the time throws doubt on the possibility of Missouri's vote for better highways being put into effect, at least at this time. There is likely to be delay, if nothing more serious.

The Missouri case is cited merely as an instance of the opposition which better highways movement meets in many parts of the country. The farmers organize against the movement and so do other inter-

ests, all of which make it necessary that good roads advocates, notable among them men who merchandise automobiles and trucks, must be equally well organized to point out the possibilities of development of the country by adequate systems of the State and interstate highways. One has but to compare, for instance, Ohio and New York to see the difference between the building of highways under county and State control. In Ohio there are some fine strips of highway, but they don't go anywhere. They lead to the boundary of a county somewhere, and the automobile or truck driver suddenly bumps into mud or ruts. Such highways surely do not meet the farmers' demands for market roads any more than they meet the demands for means of rapid intrastate and interstate transportation of passengers and freight.

On the other hand, New York has its system of permanently improved highways and feeding into them market roads for the farmer, thus meeting the needs of both long haul and short haul transportation.

Why License Mechanics?

THE annual attempt of government to inject itself further into the affairs of business is seen in bills proposed in nine states to require examination and licensing of automobile mechanics or garages and repairshops. These bills, introduced in Arizona, Colorado, Connecticut, Idaho, Illinois, Minnesota, Nebraska, North Dakota and Texas, provide in general for a board appointed by the Governor, secretary of state, motor vehicle commissioner or department of public works to examine and license mechanics and permit none except licensed mechanics to work on automotive equipment. The bills fix license fees ranging from \$2 to \$10 a year and provide fines for violations ranging from \$10 to \$100. The Idaho and Minnesota bills provide for licensing the garage or shop instead of the mechanic and require a bond from the proprietor to protect customers for damages to equipment worked on.

Legislation such as is proposed in these states contains a menace to the industry and should be thoroughly studied by dealers' and garagemen's associations wherever it comes up. It is doubtful if there is

any more justification for requiring an automobile mechanic to pass an examination than for a blacksmith to do the same thing. But, as in many another bill involving the automobile industry, it looks easier to the legislators to get money out of the automobile business than some other business. An attempt to extend government supervision of business operations should be looked upon with suspicion until investigation has proven it will accomplish something besides providing revenues.

It is interesting to note that the National Automobile Chamber of Commerce, through its service committee, is asking service managers and its members for an opinion on this type of legislation.

"Men will never go back to walking as long as women want to ride." Henry Caldwell says it in his little show booklet, "Eliminating the Reverse," and it is as good as anything we have read in a long time.

Perhaps you are through with show advertising. But what about after-show advertising?

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Wisconsin Dealer Says Contract Is All Right

Editor Motor World: I have been reading recently a great many letters in your publication, under the heading of "How Some Dealers Feel About the Dealers' Contract and Policy" as put forth by manufacturers and distributors, and to read these would give one the opinion that all manufacturers and distributors were of the same caliber, with but one idea in view, and that to put their heel on a dealer's neck.

My experience of eight years in handling Buick cars under the Milwaukee branch of the Buick Motor Co. has been entirely the opposite of the expressions you have been publishing by other dealers. I have found nothing to complain of, either in the contract which I have signed each year with the Buick Motor Co., or their sales and service policies.

This not only applies to myself, but I am very well acquainted with a large number of dealers operating under the Milwaukee branch in the State of Wisconsin and upper peninsula of Michigan, and know they feel the same.

A longer period contract, I feel, would be of no value to me, as I know and as other dealers in the territory above outlined know, that as long as we handle our business in a businesslike way, we can each year write a new Buick contract. I have never known of a contract being cancelled except for some entirely good reason, in fact it has sometimes been a wonder to me why the Buick Motor Co. continued with some of their dealers, and I have asked that question of those in charge at Milwaukee. Their reply has been: "Our success depends entirely on our dealers," explaining this by saying that a dealer would hardly have confidence to build up his place of business, his organization, were he not safe in the knowledge that the policy of the company with whom he was doing business was to build up the dealers they had, rather than make changes in dealership for improvement.

There is a great deal more I could say with reference to this subject, as I am so satisfied with the company from whom I purchase the product I sell, and know their policies have been, and will continue to be, such that will increase the dealer's earning power and help to establish him as the dealer of his community.

I cannot help but believe there are a great many more dealers who also are satisfied with their connection, and it is

only right that something should be said in defense of those who are doing business along the right lines.—Breitbach Auto Co., South Milwaukee, Wis.

The Dealer's Contract

Editor Motor World: In re your article, The Dealer's Contract. While I don't know you personally, I can't keep from patting you on the back for that

The Automobile Diagnostician

There's a little Glen Ridge clinic.

Where they treat all auto ills.
From busted differentials
To large maintenance bills;
Where the unrelenting grease hound
Crawls underneath to seek
The source of that illusive,
Noisy, tantalizing squeak.

They have pills for plugging punctures.
And salve for noisy gears
And when a radiator weeps
They have dope to dry its tears.
And if a motor's balky
And gets to running wild,
Sometimes an operation
Makes it gentle as a child.

But motor cars are pesky things
And prone to many ills,
From radiator fever
To carbureter chills.
And oftentimes they test
The auto doctor's skill,
But he just keeps on a-smillin'
Till he bends them to his will.

And who inspires the effort
That sees him smillin' through?
Who keeps the records accurate
And sends the bills when due?
Who marks the oil and grease and parts
And finds the missing gas?
Who keeps the taxi busy?
(A thankless job, alas!)
Whose pleasing personality
Spreads sunshine 'mongst the men?
Their tactful, courteous, golden-headed
Goddess of the pen.

—PETER GILLESPIE, Glen Ridge
Auto & Hardware Co., Inc.,
Glen Ridge, N. J.

good article, so full of guts and good sense. Every word of it is true, and I speak as one having authority and experience. Since 1900 I have been an automobile salesman, dealer, distributor, assistant sales manager and sales manager, the last two named in factories north and west, therefore I know that you KNOW what you are talking about.

I build my foundations on sand until 1916, when our present business was started. It's quite successful, but it is not subject to any of the evils about which you wrote so ably. *You are starting a fight to benefit the good men in the industry*, and I wish I could serve and help you. About 95 per cent of them are all right, but their cause needs a strong champion.—Southern Dealer.

Editor Motor World:

I have been reading some very interesting letters in your Motor World regarding the dealer's contract, and want to tell you I have never read truer statements than has been published in this article. We suffer the same troubles here, carrying a stock of cars through six months' winter, paying interest, insurance and taxes on same until we can deliver the cars in spring without any help from the manufacturer and get a very small discount to do this on. I have been unable to see where dealers can make a living this way, but we are bound to sell automobiles and the grip of the large manufacturers encourages us on. We are in hopes that there will be a fair basis for the dealer soon.—A Maine Dealer.

Likes All But One Clause of Selden Contract

Editor Motor World: I have read with very much interest the article in the March 9 copy of Motor World, "Why I Believe We Have a Good Dealer Contract and a Fair Policy," referring to the contract of the Selden Truck Corp.

In the main, I consider it fair to both parties with the exception of Article 10, Defective Parts.

It has always appeared to me as decidedly unfair that the dealer was obliged to assume the expense of replacement of defective parts, including transportation to and from the factory.

This cannot reasonably be charged to the customer, therefore it is a burden unjustly, in my opinion, placed upon the dealer, after the factory has examined the parts and acknowledged same to be defective. It would be only fair and just that they assume the total expense of replacement.

Yours for a better selling contract.—New England Dealer.

Editor Motor World: Am a regular reader of your magazine and have got helpful hints from its pages which have save me lots of work.—William Blackman, Patashala, Ohio.

This Department Is Intended to Assist Motor World Readers in Working Out Their System Problems—It Will Answer Questions Concerning System and Accounting

It's Just as Important for Your Parts Stock as Checks Are for Your Bank Account

Furthermore, a system of stock accounting is required in the preparation of the profit and loss statement. Without it, it is necessary to make a physical count of the material on hand in order

Fig. 1—One of these cards is made out for each part or accessory in stock. It shows the balance on hand at any time as well as sales, costs and rate of turnover

to arrive at the cost of the parts sold during the period covered by the statement. This is a large job, and generally it is done but once a year. But the dealer should have a statement at least every month of the profits and losses in each department of his business. Information of this character is essential to him as an executive. A stock accounting system will help him get it.

When the dealer invests his money in parts he is making a deposit just as truly as when he puts his money in the bank. He keeps track of the input and output of his bank account in his check book. Here is a way to keep the "check book" of the parts department.

The first step in organization of the parts department is the provision of bins in which to store the parts. "A place for everything, and everything in its place," is a good basis to work on in this department. This policy has several advantages. The stock clerk can easily and quickly locate any part he wants, and further it minimizes the chance of loss. In addition, it greatly simplifies the work of checking up the stock of any particular part, as each part has its individual bin.

The parts should be arranged in the bins in accordance with some system. One way is to store them in the order of the part numbers. Another way is to number the bins consecutively, and to place the bin number on the inventory card. Each individual dealer can design an arrangement for himself that will best fit his needs.

The most satisfactory method of parts accounting is the perpetual card inventory system. These cards convey the same information about the parts department as does the record of deposits and withdrawals in the check book about the bank balance. A typical card for this purpose is shown in Fig. 1. One of these cards is made out for each part, and they are all filed in a tray which is convenient to the stock clerk.

The name of the part is placed on the projecting guide, and directly below it is placed the bin number. It is assumed that the parts are stored in numbered bins. Below this, on the left side, is the description of the part, and spaces for putting in the names of companies from whom quotations on this part have been obtained. In the case of parts for the car handled by the dealer, it is unnecessary to fill these spaces in. The various companies listed here are assigned numbers, and a record of the quotations received from each, recorded in the upper right hand corner of the card. This gives the net cost and selling price at a glance.

The card as filled in shows that 12 spark plugs were received on Jan. 1 from the Auto Jobbing Co. at a net cost of 70 cents; that three were sold on Jan 3, and four on Jan. 5. On Jan. 6 another shipment was received, bringing the stock up to 65. At the end of the month, by adding up the individual sales and multiplying the total by the unit cost, the cost of all the spark plugs of this type sold during the month is secured. In a similar manner the gross

sales of this particular spark plug for the month are obtained. Of course, if during the month some plugs are purchased from the Mutual Jobbing Co. at 50 cents each, and some of these are included in the sales for the month, this factor must be taken account of in arriving at the cost of the spark plugs. The difference between the sales and the cost, of course, is the gross profit. By making similar calculations on each card in the file, the monthly gross profit for the department is determined. As a check on the accuracy, the total sales as indicated by the inventory cards should equal the gross sales as indicated by the sales tickets.

For every part which leaves the stock-

as the "maximum and minimum." Maximum and minimum figures are set for each part, and the stock on hand should always be maintained some place between these two figures. Whenever the stock approaches or falls below the minimum figure, the stock clerk places an order for more. It is quite customary to place these maximum and minimum figures on the bins, so that the clerk can tell by inspecting any bin whether a proper supply is on hand.

The balance on hand, as shown by the inventory card, should agree at all times with the quantity in the bin. Although it is not usually necessary to check the inventory against the stock in the bins more than once a year, the fact that

An Interdepartmental Order Form

[illegible]

Fig. 2—When another department requires a part from the stockroom, this requisition is used. The columns relating to costs and selling prices are filled in by the stock clerk

room, the stock clerk should have a voucher. In the case of sales over the counter, he makes out a sales ticket which gives the name of the part and the selling price. Where the part is supplied to some other department, that department presents a requisition similar to the one shown in Fig. 2. The stock clerk fills in all the columns indicating costs and selling prices. The entries on the inventory cards are made from these vouchers. In the case of an interdepartmental sale, the full retail price should be charged to the department receiving the part, because this profit belongs to the parts department. For instance, in the case of the service department, it buys a connecting rod at the retail price and sells it at the same figure. But it gets paid for the labor of putting it in.

By reference to the inventory cards it is easy to tell just how fast each portion of the stock is selling, and at what periods of the year each part or accessory sells best. This is of great assistance in ordering replacement stocks. Another system of maintaining proper balances in the parts department is known

there is an accurate check readily available tends to discourage dishonesty.

The inventory records can be of very valuable assistance in both selling and ordering; and this is especially true of accessories. The cards show what goods are selling, and the rate at which they are selling. They call attention to the dormant lines, and it is often possible to clean out dead stock by some intelligent sales promotion. The cards help in buying because they show when new stocks are necessary. And they show up lines for which there is no sale, and the buyer is warned not to purchase any more of this particular accessory.

A stock accounting system tells

- 1—The total investment in stock.
- 2—The quantities of each part or accessory in stock.
- 3—The cost of each part or accessory.
- 4—The sales of each part or accessory.
- 5—The gross profits of the department.
- 6—The location of the bin for each part.
- 7—The rate of turnover.

No dealer can afford to be without this information.

A Department of BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 184

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

How to Departmentize Your Shop

Economy in Shop Operation Is Possible If the Different Kinds of Work Are Delegated to Different Men in Separate Departments

DEPARTMENTIZATION in the shop means specialization, and this in turn means more work turned out at a smaller cost. The jack of all trades is a thing of the past, and each man in the shop, no matter whether the shop be small or large, should have one class or group of work to attend to, this work being the kind that he is best qualified to do. There are a number of different kinds of work done in the automobile repair shop, and these may be classified as follows:

Office.

Quick Service.

Storage.

Washing and Polishing.

Stock of parts and tools.

Repairs—

1—General.

2—Engine.

3—Clutch and gearset.

4—Axles.

5—Radiator.

6—Tires.

7—Body and top.

8—Electrical.

9—Blacksmith and welding.

Each of these divisions is a work in itself, requires different kinds of tools, equipment and workmen, and it is generally possible to have the different classes of work done in different parts of the shop. Without taking into consideration the layout of the building, the classes of work are taken up separately

Office

In the office should be kept all records, books, correspondence and things of a clerical nature. There will, of course, be records kept out in the shop, such as time cards, stock records, etc., but these all revert eventually to the office. The office should be clean and tidy with a minimum amount of furniture, but with

sufficient equipment to do business. A vertical file should be used for correspondence, and it might be said here that not all correspondence should be filed. A lot of it can be thrown in the waste basket, because it is of no value. Books and large bound catalogs can be kept on a shelf or in a bookcase, and other catalogs in a vertical file. A typewriter is almost a necessity, no matter

Make the various departments stand on their own feet and each pay your business a profit. This can only be done by separating them in some logical way and keeping the records separate.

how small the shop. Some good makes can be bought as low as \$50, and they will pay for themselves very quickly. Larger establishments will find good use for billing machines and adding machines.

Much of the detail work around the office can be done by one or more girls. The office, like the shop, should have its work planned, and there is no reason why a manual showing how and when to do everything in the office would not cover 80 per cent of the office "operations."

Quick Service

In a shop of any pretensions at all there should be a special space laid aside, preferably at the front, where quick service can be done on cars. This usually consists of changing plugs, changing tires, making small adjustments, tightening up bolts and nuts, etc. This department should be supplied with most of the ordinary tools to fit the cars

handled, and a very convenient arrangement to have in this department is a portable bench on large castors. This can be moved around to the car. The bench carries an assortment of wrenches and small tools and also a small outfit of bolts, nuts, screws, etc. It can also have space for new plugs, valve caps and covers, and other small articles frequently needed. This will save a good deal of running around the shop after tools and will enable the man in charge of this department to quickly perform the work on the car. Where the shop is so small that this sort of work would not keep one man busy all the time, a man regularly working in another department could be assigned to this work when it came in.

Some apparatus for testing the electrical equipment should also be included in the quick service department. It can be as simple as a couple of dry cells in a small wooden box with a 2-volt lamp, or it can be one of the more elaborate devices on wheels with a storage battery, ammeter, voltmeter, etc.

Storage

The storage department will be a variable, depending on the general character of the business. In the case of a garage, half, or even more than half, of the general business will be storage, and considerable attention should be paid to arrangements, rates, costs, billing, etc. If possible one man should take charge of this department and see that it pays for itself and brings in a profit. Where storage is secondary, as in the case of a service station, the storage department simply becomes an overhead expense because it is only on rare occasions that any charges can be made directly for keeping the car. Being an overhead, however, means that the ex-

pense should be cut to the smallest possible figure, and by carefully studying the conditions it may be possible to cut down the space devoted to storage and give this space to some more profitable department.

Washing and Polishing

This is closely allied to the storing of cars, and the two departments could well be managed by one man. The wash racks should be close to the space where the cars are stored and at the same time convenient to the entrance or exit of the building. It will be found economical to have a progressive system in washing and polishing. Enclosed cars will usually need the services of a brush or vacuum cleaner, and this operation can come first so as not to get dust over the finish after it is washed. The car next passes to a man who washes the grease and grime from the running gear and then the body washer finishes up the more particular parts. The drying and polishing come last. If the amount of business in washing warrants it, the cars can be moved along in a line much like a factory production job. Where only a few cars are done each day, this would be impossible and one man would probably have to do all the operations. Even then it would be better to have him do all the operations separately, except the washing and drying, which should be done together so as not to allow the water to dry on the varnish without the use of the chamois.

Stockrooms

The stockroom is a place to either lose or make money, depending on how it is operated. It goes without saying that very careful records must be kept of all incoming and outgoing parts, equipment and materials, and it will really pay to have this department fenced off and placed in charge of someone, no matter how small the establishment. For a small garage, this can be one corner of the building fenced off with light lumber and chicken wire. For a larger establishment, it may be found more economical to have two or three stockrooms carrying different kinds of stock. One of these will have to be on the first floor and will have one face in the salesroom, if there is one, so that car owners can come to the counter or window and buy parts direct. The shop should have a window convenient so that the men will lose a minimum amount of time getting the materials that they require for repair jobs.

All special tools, stock of soaps, paints and varnish, and all that sort of thing, should be kept in the stockroom and should not be issued without the certainty that they will be charged to the customer. Oils, greases and gasoline are the source of many expensive leaks. It is not generally possible to have the gasoline supply under the direction of the stock keeper, but the oil and grease can come under his charge. A pint of oil here and a pint there soon mounts up, and the losses would pay for having a man in charge of the place.

Repairs

The repair department is to be under

the charge of the shop foreman, or whatever title he may have assigned to him. The car entering the shop for repairs will first be taken charge of by the tester or service salesman, who finds out what the trouble is, then writes out the order and sends the car into the shop. After the car is received in the shop, a further departmentization of the repair business should be worked out. By having the shop laid out so that all the tools and equipment for a certain process are in one place, the work will be improved and time saved. The engine department will have to be the largest because engine work constitutes the bulk of repair work. Overhead trolleys will economize on room, because the parts

Drill Presses

The next issue of Motor World will contain the third of a series of articles on the selection, use and care of machine tools and shop equipment, this installment dealing with drill presses. Previous articles in the last issues in January and February took up arbor presses and taps and dies.

can be lifted out of the chassis and run to the department where they are to be worked on.

The engine department should have engine stands, hoists to lift off cylinder blocks, a kerosene cleaning tank for cleaning the parts, and some boxes, trays or large drawers where the parts can be stored until the engine is ready to be reassembled. The electrical parts of the car can preferably be taken care of in a separate department which will be fitted up with all the testing outfits necessary and with all the tools and jigs for doing the actual repairing. All special tools for the engine may be kept in the engine department unless they are of an expensive or delicate nature, in which case they may be kept in the stockroom.

The clutch and gearset section of the shop should be adjacent to the engine department, and in a small shop can be really one section with the clutch and gearset tools and equipment on one side.

The axle department should be provided with assembly stands, washing tank, special tools, and should also be close to the stockroom and near the engine and clutch and gearset departments.

The radiator repair department will be fitted out with some kind of a stand to hold the radiator, a test tank, air pressure and a blow-torch. If a blacksmith department is also wanted, these can be consolidated, and perhaps some welding done also. These processes all require open flame and had best be kept in a separate fireproof section of the shop. In many communities this is required by law, but it is best to arrange things this way for safety sake.

The body department will be devoted

to upholstery work, top repairing and refitting, painting and varnishing. The varnishing must be done in a dust proof room. If there are windows opening to the outside of the building, these can be fitted with cheesecloth screens to keep out the dust. If the volume of business is sufficient, all windows can be kept tight shut and a ventilating system installed which will filter the clean air and also keep the temperature of the room at about 80 deg., which is the proper heat for varnishing.

Body work also requires a considerable amount of carpenter work, and a pretty complete carpenter's outfit of tools will be necessary. Fender and body panel straightening can be done in this department, and the rough coats of paint applied outside, leaving the dust proof room free for the finishing coats of varnish.

Relation to Other Departments

Only the actual shop has been considered in these recommendations. Practically every establishment will have a selling department of some kind, and it is necessary that the shop departments work in harmony with the selling organization. Where cars are sold a certain amount of the shop space will have to be given over to the storing of new cars, testing and adjusting new cars before delivery, and performing a certain amount of service on the cars under the guarantee after they are in the owners' hands. Departmentizing will assist the sales department very materially and the records showing the amount of work done by the shop on new cars can very easily be kept separate by using different kinds of forms.

NEW HAMPSHIRE ADOPTS UNIFORM VEHICLE LAW

MANCHESTER, N. H., March 19—More than 100 motor dealers from all parts of the State attended the annual dinner of the New Hampshire Motor Dealers Association here this week, which was held in conjunction with the automobile show. It was the most enthusiastic meeting the dealers ever held. President McKinney was in the chair.

Amos J. Shorey, New England director for the N. A. D. A., was the principal speaker. He gave an interesting talk on the work that had been done by the national dealers organization since its organization, and outlined the plans for the coming year. He showed the value of organization, and emphasized the fact that membership carried more than the mere paying of dues. His talk about how the makers and dealers plan to co-operate toward making equitable contracts and better the industry, was received with much enthusiasm.

Highway Commissioner Staples told about the new legislation proposed and said he was neutral as far as increasing fees was concerned. He told the dealers that New Hampshire had decided to adopt the National Uniform Motor Vehicle Law proposed by the N. A. D. A. and the N. A. C. C. It is the first New England State to do so.

SCIENTIFIC CONSTRUCTION

GARAGES

SHOWROOMS

REPAIRSHOPS

Conducted by DONALD D. BLANCHARD

Basement Has Few Advantages for Storage

Cost of Construction May Be Somewhat Less Than That of Additional Story, but Space Is Not as Desirable

THE basement of a building is always dark, and in many cases somewhat damp. For this reason, it is not as desirable a place for car storage as are the upper stories of the building. The cost of constructing a basement is little, if any, less than the cost of an additional story, except in such cases as the property level is below the street level, which condition reduces the excavation costs. On the other hand an upper story is a more satisfactory place to the car owner.

In addition the basement complicates the ramp installation in this particular building. It is somewhat difficult to get onto the ramp to the basement. In a three-story building, a straight ramp extending along the wall on the right side of the building, could be used. Of course, a straight ramp would take more space than the construction indicated, but it would add to the convenience of car movement within the garage.

Three Car Showroom

The sales and executive units are located in a compact unit at the front of the building. The showroom provides for the display of three cars without

MOTOR WORLD is glad to receive and answer inquiries for garage plans, but in order that there may be as little delay as possible in submitting the plans desired it is imperative that the following information be given:

Size of plot, with rough sketch showing shape and its relation to adjoining plots; name and number of departments operated; number of cars to be shown in salesroom; number of cars in garage; any other pertinent details.

crowding. The accessory store is next to it, and back of it is the accessory stockroom. General and private offices are also provided here.

The service department is on the first floor at the rear. In comparison with the rest of the building it is not very large, but if the space within it is used exclusively for cars on which work is actually being done, a lot of work can be handled here. The combined tool and parts room is conveniently located at one side of the shop.

The position of the columns is not in-

dicated but they can be fitted in so that they will come along the edges of the rows of cars. Practically all of the building, with the exception of the second story will require artificial illumination at all times. The building presents a neat, well-balanced appearance from the front which is a feature that will have an important advertising value.

FIT YOUR BUILDING TO YOUR BUSINESS

EFFICIENCY in a building is the result of analytical forethought. It enters into the cost of doing business in two important ways. If the building is too large for the business, the high first cost will result in increased fixed charges for which there will be no return. The same result will be obtained if the building is needlessly expensive.

In a similar manner, if the interior arrangement of the building does not make for efficiency, the operating charges will be too high. If, for instance, the columns in the garage are placed 18 ft. apart, there is too much room for two cars between them, but not quite enough for three. This is a difficulty that can always be avoided if the use that is to be made of the space is carefully analyzed.

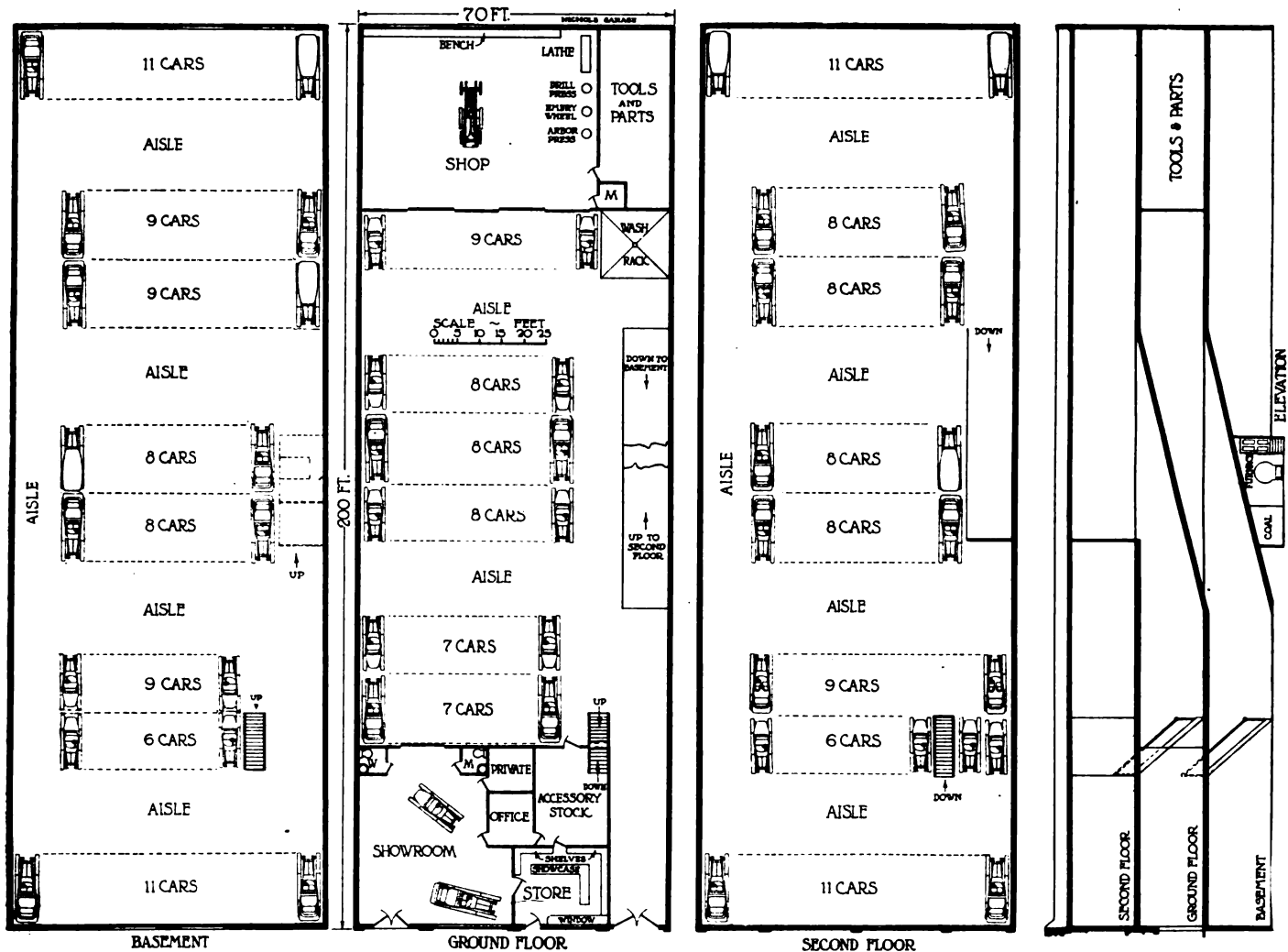
Special Tools Important

The same idea holds in the matter of building equipment, and it is especially applicable in the service section. Special tools have been a wonderful help in reducing labor charges in the shop, and many shops are practising false economy by going without them. However, it should be remembered that heavy investments in equipment are not justified unless there is sufficient work to keep the tools busy. The single purpose tool will keep the labor charge down, but the fixed charges on each job, where the tool is not kept reasonably busy, will more than compensate for any savings on labor.

In a properly designed and equipped building, provision is made to minimize the costs of doing business. This end is



This neat, well-balanced front has dignity and beauty, and the materials used need not be expensive



Although this is a complete dealer building, the greater portion of it is devoted to storage

accomplished by analyzing the uses of the various portions of the building, and then building and equipping each part so that the work that is to be done in it, can be carried on most economically.

National Association of Cost Accountants' Year Book

The 1920 *Year Book* of the National Association of Cost Accountants which has just been published is an attractive volume which ought to prove of real value to all men interested in cost work. In addition to the reports of the various officers and committees and a list of the members of the Association, it contains a complete report of all the papers delivered at the Annual Convention at Atlantic City, together with the discussions which followed each of these papers. This section contains a fund of practical cost information of a type which does not, as a rule, find its way into print. The Atlantic City Convention was probably the most important gathering of cost men which has been held in this country and the opinions of the men who took part in this conference are worthy of some study.

The *Year Book* is distributed to all members of the association. There are a few copies available for general dis-

tribution to men interested in cost questions. The offices of the Association are in Rooms 2546-2548 Woolworth Building, 233 Broadway, New York City.

To Make \$1,000 Steam Car

INDIANAPOLIS, March 18—Manufacture of a low-price steam motor car, which will sell for about \$1,000 will be

undertaken in this city when experimental work is completed.

Details of the car indicate that it will use a combination high pressure fire and water tube boiler, delivering its steam through a torque tube and steam pipe combined to a 6-cylinder engine contained as a unit in the rear axle.

A factory will either be built or bought here.

Another Job for the Automobile



An automobile supplies the power for this tractor, which is the invention of George L. Schofield

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Where Garage Was Held a Nuisance

Although cases where it is charged that a garage is a "nuisance" or a "public nuisance" are not nearly so common as they were a few years ago, still an occasional case of this character is found in the law reports.

A recent case of this kind, where an attempt was made to procure an injunction against the erection of a garage, is the Pennsylvania case of Phillips vs. Donaldson, reported in 112 Atlantic Reporter at page 236.

In this case the complainant charged that "If this garage is erected and operated according to the plans and specifications there will be noises, odors and dangers. Automobiles will be passing in and out of the said garage intermittently during the entire day and night; there will be pounding upon metals; testing of the engines at varying speeds, to which will be incident the continuous explosions of gasoline in the motors, of varied intensity; speeding and racing of motors. These noises will occur during the day and night and would be heard for various distances, depending upon the then existing conditions. The odors from the gasoline and oils will be disagreeable and offensive. Smoke will be emitted from the motors of the automobiles in varied quantities, depending upon the kind of machine, the skill of the operators, the atmospheric and other conditions, all of which would be more or less noticeable in the immediate neighborhood and unpleasant to the persons with whom it came in contact. The exit and entrance of the automobiles into the garage during the day and night will be dangerous to the pedestrians (especially children) passing along Ridge Avenue. It will necessitate (particularly in winter) the more or less continuous sounding of horns, noise and confusion. All of these matters would seriously and permanently interfere with the peaceful enjoyment of plaintiff's home and other residences in the neighborhood. The conduct of the garage would result in the congregating of a number of persons in and about the property. This would have a pernicious effect upon the children who pass and repass the garage. The storage of a sufficient amount of gasoline to serve the patrons who use a garage of this size, the storage of the automobiles, the keeping of the quantities of the oil necessary for the operation and lubrication of the automobiles, smoking by attend-

ants and others, the use of electric current near the gasoline and oils, the adjusting of carburetors, the replacing of tires, the moving and washing of the cars at night, the backfire of motor cars, the explosions of gasoline, will all result in added danger from conflagration, all of which will have the effect of reducing the values of the properties surrounding the garage, and will tend to the removal of the tenants presently living in the neighborhood. It will increase the rates of insurance, will impose additional burdens upon the surrounding properties and will decrease the net return therefrom."

The court held that, as the neighborhood was a residential one, a covenant on the land against noxious businesses would be enforced and the building of the garage prohibited when the neighborhood had not changed to such an extent so as to prevent enforcement of the covenant.

A pickle factory and a transfer station beyond a railroad were considered not to have changed the character of the neighborhood sufficiently to justify a charge of "change of neighborhood."

Another Case

In another Pennsylvania case the garageman concerned in the case set out above obtained an injunction against interference with a business conducted in a church which had been turned into a garage. The court decided that, as the neighbors had made no complaint during the several years the business was operated, they could not prevent the erection of a new building, when the old one burned down, providing, always, the new building was no larger than the old one, and the business to be carried on was substantially the same as the business which had been carried on in the converted church. Phillips vs. Dunseith, 112 Atlantic Rep., pg. 240.

Should Have License

Editor Motor World: Myself and another party have the agency for selling a certain motor truck for this county. We live in the country, are farming and have a truck that I use for my own hauling and also for demonstration where we have a prospective buyer.

Will it be necessary for us to buy a regular license for this truck, or would we be allowed to use the dealer's number plate, providing we use this truck for our own use, as above stated?—K. R., Harrisburg, Colo.

Answer: You might use it and get away with it. I do not think it is the proper or lawful thing to do, however. As a farmer and as an automobile dealer you are two entirely different individuals, and I think the State meant to stick you for a license fee in each capacity.

Seizing Car Under Jersey Lien

Editor Motor World: I would like to know about retaking a car under the New Jersey Garageman's Lien Law. Do we have to have some officer retake the car for us? Suppose we find a car standing at the curb on a street, can we get in and drive it off to our garage? If we found it as described above could we put a lock on it and hold it until we are ready to run it or tow it to our place? How about when we find the car in another garage? What can we do in a case like that? Does it make any difference if the car has been sold to another party or not or is our bill against the car just the same no matter who is the owner at the time we find it? We also understand we are to take bills coming in against the car and hold them against it. If so are they to be paid from the money received for same? If my bill is paid must I hold the car for other people's bills?—J. J. A., Atlantic City, N. J.

Answer—Answering your questions in the order in which you ask them I beg to say:—

It is not necessary to have a law officer with you when you retake a car but it is always advisable to do so, as a constable represents the law and is able to see that no breach of the peace occurs.

A claimant may repossess himself of a car no matter where it may be found, what its condition may be, or in whose charge it is.

You can repossess yourself of a car under the circumstances set out in your question. Your debtor must pay all the charges. You may put a lock on the car if you choose.

Of course you have no right to keep property which is in your charge in another person's garage without becoming liable for the reasonable charges for keeping it.

It makes no difference who holds or buys the car as the lien follows the property. Each party must make his own attachment. If a bill is paid the car must be released. The lien law is a very sweeping one. You can take possession of property wherever you find it and keep it until your bill is paid.

Repairshop Shortcuts

No. 2873—Piston Ring Jig—A jig to hold a piston ring while filing the slot is made from a board with a slot and two clamp screws. These screws keep the ends of the ring held apart while the file is used.—A. J. Faust, Springfield, Mass.

No. 2874—Handy Bench Anvils—Old crankshafts cut up in sections make handy anvils for mounting on the bench. Holes are drilled in one of the throws so that it can be screwed fast.—Charles H. Willey, Concord, N. H.

No. 2875—Drum or Barrel Cradle—Two wagon tires and two pieces of wood are used in the construction and the drum or barrel is held in position with a strap. The drum can be easily tilted to any position by one man.—William Blackburn, McFadden's Garage, Pata-shala, Ohio.

No. 2876—Removing a Bearing Cone—A bearing cone which sets in flush can be removed by cutting two narrow slots from the spindle with a cold chisel, inserting the arms of a puller in these slots.—A. J. Faust, Springfield, Mass.

No. 2877—Driving Hole for Work Bench—Where pins and shafts have to be driven out on the bench, a hole is bored through and then a recess cut the size of a large washer so that the washer comes flush with the top of the bench. This will prevent marring the bench.—Edward Bredor, Rock Island, Ill.

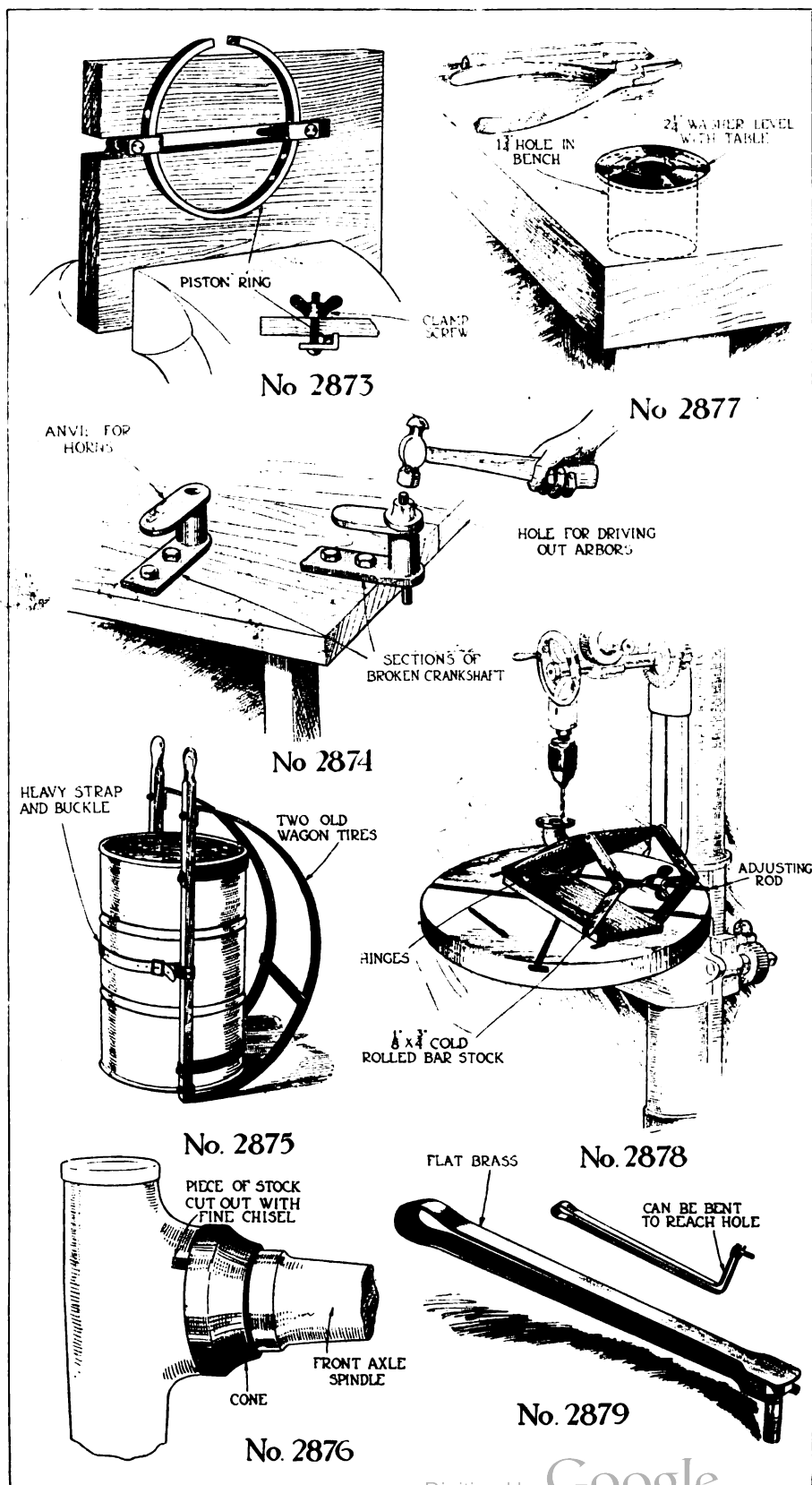
No. 2878—Adjustable Angle Plate—For drilling holes in irregular pieces that will not stand up on the drill table, the adjustable angle plate is used. It consists of two boards, some strap iron and an adjusting rod as shown.—Charles H. Willey, Concord, N. H.

No. 2879—Bolt Replacer—For replacing bolts and cap screws in inaccessible places, the device shown is used. It is made of flexible metal so that it can be bent to any shape desired. The spring of the metal holds the head of the screw.—W. B. Wheatly, Brooklyn, N. Y.

MAKE A DOLLAR

SEND in a sketch and a brief description of the device you used to solve some particularly difficult problem. Sign your name and furnish us with the name and address of the concern with which you are connected.

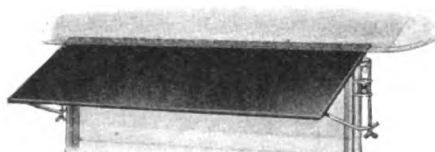
Motor World will pay a dollar for every idea accepted for publication.



Automotive Equipment

SEE-WEL WINDSHIELD CANOPY

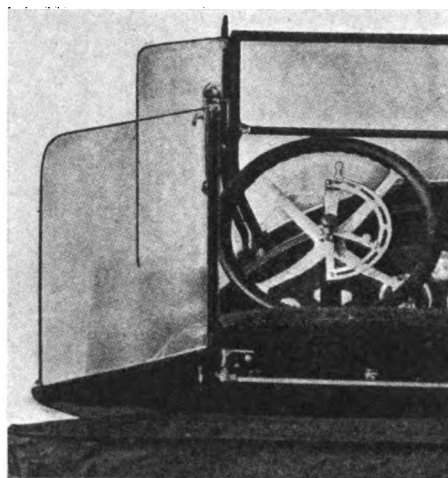
This canopy is made in two sizes, which fit all open and enclosed cars. It is said not to interfere with the windshield, spotlight, or other accessories, and can be adjusted to any angle. On open cars it is attached with clamps, and on enclosed cars, it is screwed to the body. Prices, standard finish, \$8.50; DeLux finish, \$10.—Model & Metalwork Mfg. Co., 120 Opera Place, Cincinnati, O.



See-Wel Windshield Canopy

BENTEL TONNEAU DEFLECTORS

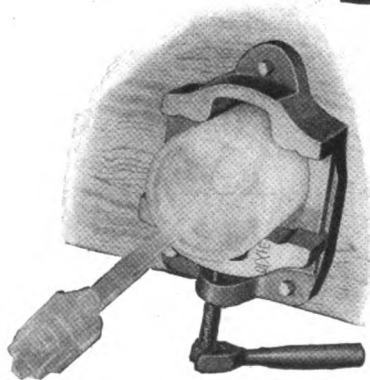
This equipment consists of two glass deflectors mounted at an angle above the forward edge of each door to the tonneau. There is no transverse pane extending across the back of the front seat. The deflectors are strongly made and well-finished. Reim-Thompson Co., 1015 South Grand Avenue, Los Angeles.



Bentel Tonneau Deflectors

ADJUSTABLE PISTON VISE

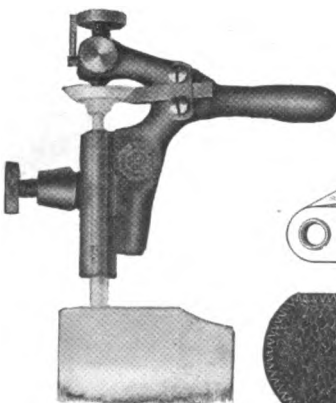
This vise is equipped with four lugs so placed as to divide the pressure equally on the piston thus eliminating the possibility of springing it. Two lugs are movable so that the vise may be adjusted to any size piston from 2½ to 4½ in. Price, \$7.50.—Tuthill Sales Co., Kansas City, Mo.



Adjustable Piston Vise

VALVE FACING TOOL

The cutting tool in this device revolves around the valve. The feed screw has a micrometer adjustment which permits of very accurate cuts being taken, and which also enables the mechanic to calculate the adjustment on the cam end of the valve stem. It is also used for testing the alignment of valve stems. Price, \$5.—Tuthill Sales Co., Kansas City, Mo.



Valve Facing Tool

BURGESS-NORTON ADOPTS NEW PACKING

The Burgess-Norton Mfg. Co., Geneva, Ill., has adopted a new method of packing piston pins so they can be sold by the dealer without splitting a carton. This method consists of packing a set of four, six or eight piston pins in an individual carton, according to the number of cylinders and make of car for which the pins are intended. A four-cylinder car can accordingly be fitted out with new piston pins in a carton of four. Each individual carton is marked according to the contents and a



Smith Caplock

number of cartons are packed in a larger carton for jobbers. Each pin in the carton is painted upon one end to indicate the size—green for standard size, yellow for .003 oversize, red for .005 oversize, blue for .010 oversize, and white for all odd sizes.

SMITH CAPLOCK

This is a Motor Meter lock. It is installed in a small hole which is drilled in the radiator cap. The Motor Meter is secured by a conventional key-operated lock. Price \$2.—O. P. Smith Co., 205 West Harrison Street, Chicago.

Combination Grease and Oil Gun

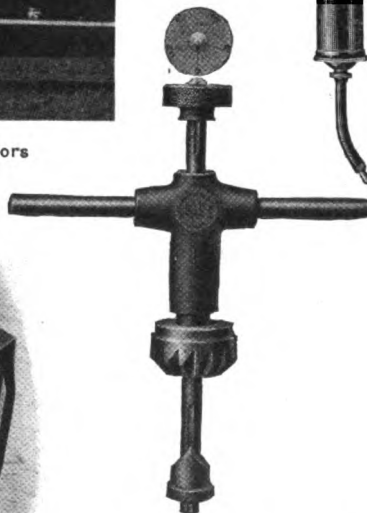


COMBINATION GREASE AND OIL GUN

This gun is made of brass and its exterior is highly polished. The plunger is of the double leather type with the leathers reinforced by two steel washers. The plunger locking thumb nut gives two actions, that of the screw-down type gun for greases, and that of the push-and-pull type for oils. The spout is provided with an oil nipple which may be removed when the gun is used for grease. Price, small size, \$2; large size, \$2.50.—World Metal Products Corp., Richmond Hill, N. Y.

DIXIE VALVE SEATING TOOL

This is a valve reaming tool. It has a micrometer adjustment on the top by means of which the depth of cut can be accurately adjusted. The 45 deg. reamer is regularly furnished with this tool, but reamers for any other angle are furnished at small cost. Price, \$5.—Tuthill Sales Co., Kansas City, Mo.



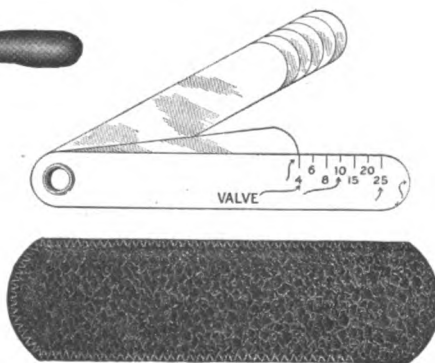
Dixie Valve Seating Tool

CHANGE IN ARG AUXILIARY SPRING

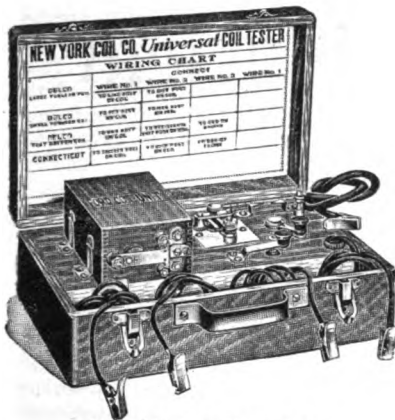
This device has been changed so that it can be installed on Ford cars having but one clip on the front spring. ARG Auxiliary Spring Co., Birmingham, Ala.

HOPEWELL THICKNESS GAGE

The gage consists of a handle .030 in. thick, and seven leaves of the following thicknesses: .004, .006, .008, .010, .015, .020, .025 in. The leaves are of various lengths so that when drawn out of the handle they lie against a scale which indicates their thickness. An imitation leather case is furnished with the set. Price, 75 cents.—Hopewell Bros., Watertown, 72 Mass.



Hopewell Thickness Gage



New York Coil Tester

NEW YORK COIL TESTER

Troubles in the ignition system which are due to defects in the coil windings or condenser are located by this testing set. The test set is contained in a substantial cabinet with nickel fittings. It may also be used for testing magneto armatures, and it works equally well on six- and twelve-volt coils. Price, \$20.—New York Coil Co., 338 Pearl Street, New York City.

WESTON HEAVY DISCHARGE BATTERY TESTER

This instrument consists of a well-designed, substantial prod upon which is mounted a direct-current voltmeter having a range of 3-0-3 volts. The prod has a wood handle, and the points are so spaced that they fit the cell terminals of the standard automotive battery. The prods are connected by an alloy strip which passes about 200 amp. when the cell voltage is 2. It is known as Model 453. Price, complete, \$18; prod only, \$8.50.—Weston Electrical Instrument Co., Newark, N. J.

MARKOMI ASH RECEIVER

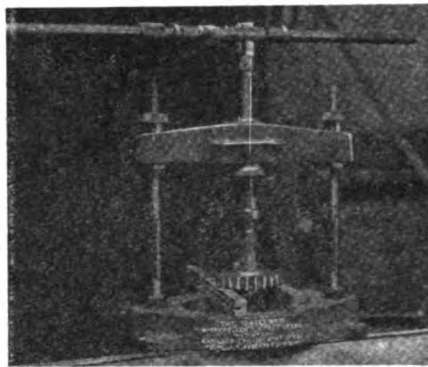
An ash receiver, matchbox holder and bracket are included in this fitting. The ash receiver fits into a holder on the bracket, and can be easily removed for cleaning. Price, \$2. Other products of this company are a spark plug knife, 4-in. combination pliers and a matchbox holder.—Markomi Co., Inc., 2948 Woodward Avenue, Detroit.

HAMMOND NEVER SLIP PORTABLE CRANE

These cranes are made in six sizes with lifting capacities of from 1 to 3½ tons. The wheels and hoisting axle are mounted on Hyatt roller bearings. The hoist locks its load at all points of travel, and the load can be raised or lowered very accurately. The lifting mechanism is of the worm and wheel type.—Barrett-Cravens Co., 169 North Ann Street, Chicago.

GAILLARD WHEEL PULLER AND ARBOR PRESS

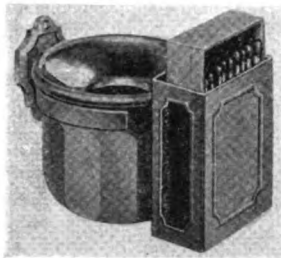
A combination tool which can be used for pulling wheels, as a pipe vise, as an arbor press,



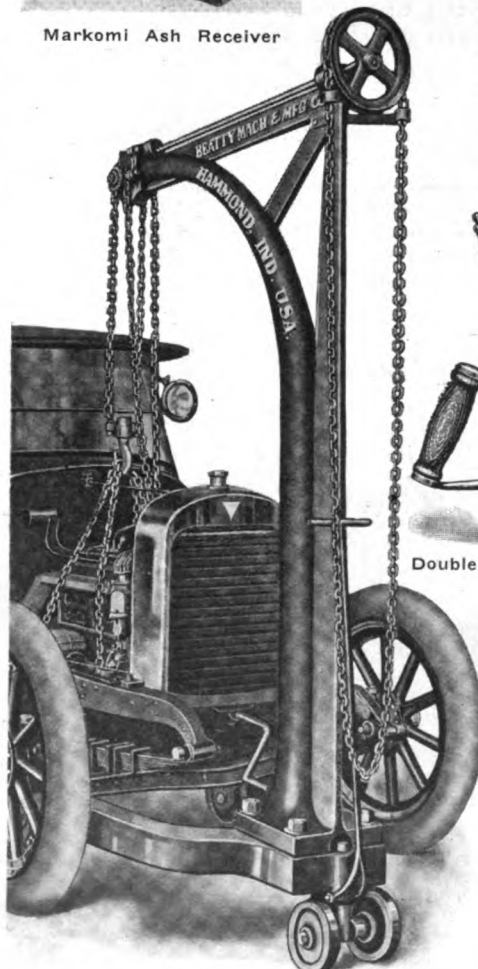
Caillard Wheel Puller and Arbor Press



Weston Battery Tester



Markomi Ash Receiver



Hammond Never Slip Portable Crane



Greb Rear Axle Press



Double Blunt Needle Torches



Automatic Water Saver



Signal-Lite Safety Signal

and other jobs requiring pressure. The press is said to be made of the best materials, hardened where necessary, and tested before leaving the factory. Each tool is packed in a strong box for shipment. The illustration shows the use of the tool as an arbor press. Price of wheel puller, \$30. Puller and arbor press, \$40.—Gaillard Engineering Works, 147 Rogers Avenue, Brooklyn, N. Y.

SIGNAL-LITE SAFETY SIGNAL

This is an automatic signal. When the brake is applied the signal reads stop; when a left turn is made the signal reads left, and similarly for a right turn. The signal is contained in a small box which is placed over the rear license plate. It is visible in the day time and need only be illuminated at night. It is operated from the battery or magneto. Price—\$20.—Auto Safety Signal Co., 22 Allen Street, Rochester, N. Y.

GREB REAR AXLE PRESS

This press is known as No. 12, and is designed for removing axle and driveshaft gears, and pressing on axle gears. It takes shafts up to 1¼ in. and gears up to 6½ in. It may be used for removing wrist pins, timing gears, spindle body bushings, straightening connecting rods, or other small work. Price, \$35.—Greb Co., Inc., 172 State Street, Boston.

DOUBLE BLUNT NEEDLE TORCHES

These torches are made in three sizes—2 qt., 1 qt. and 1 pt. The burner is of a new and improved design. The lower needle is a shut-off and the upper a cleaner needle which automatically removes any obstruction in the orifice, thus making a clear passage for the gas under all conditions.—Clayton & Lambert Mfg. Co., Detroit.

AUTOMATIC WATER SAVER

With this device on the wash hose, no water is wasted. It consists of an aluminum nozzle with a spring valve which shuts off the water as soon as it is released. Price, \$5. This manufacturer also makes a full line of rotating overhead washing fountains.—N. S. Schaefer, 62 Vienna Street, Rochester, N. Y.

American Rolls-Royce Identical With British Product

*Manufacture and Assembly in This Country Makes Saving
of \$2000 Over Importation*

WITH a number of chassis delivered already, the American plant of the English Rolls-Royce car makers is swinging into full production rapidly. This plant was born during the war and came into existence through the necessity of furnishing parts for Rolls-Royce cars and airplanes from some point close to an available supply of materials and labor. An organization was built up which was able to supply this demand and it is now being used to turn out a limited number of Rolls-Royce cars in this country, these being identical in every detail with the English cars. The English works are said to be sold out for two years, and by manufacturing in this country it will not only allow more cars to be purchased over here, but will also avoid some expenses in connection with importation, this alone amounting to over \$2,000.

The Rolls-Royce is the highest priced stock car made in the world today, the chassis selling in this country for \$11,750. All bodies are custom and prices are not furnished. In a car of this kind one naturally expects not only the use of the best of materials and the highest grade of workmanship, but also elaborateness of design in respect to all features tending toward greater comfort and convenience of the owner and operator.

Contrary to general belief, much of the cost in this car is not in hand work, because practically every part is made on special machines. A very great deal of care however, is exercised in the as-

Specifications of the Rolls-Royce

Price—Chassis, \$11,750
Engine—6 cylinders, $4\frac{1}{2} \times 4\frac{3}{4}$
Wheelbase—143½ in.
Gearset—Selective, 4 speed
Rear axle—Full floating
Front springs—Half elliptic
Rear springs—Flat cantilever
Generator—Lucas
Tires—33 x 5 in.
Clutch—Internal cone
Wheels—Detachable wire
Manufacturer — Rolls-Royce of
America, Inc., Springfield, Mass.

sembly and fitting, and every detail is worked over until it is absolutely right, this often requiring a month before the car passes final inspection. The result obtained by this painstaking care is evidenced by the warranty which guarantees the car for three years against defective material and workmanship, and not only will parts be replaced free under the warranty, but the labor of fitting them into the chassis also. This is practically a unique policy.

Engine

The engine has six cylinders $4\frac{1}{2} \times 4\frac{3}{4}$, the cylinders being cast in blocks of

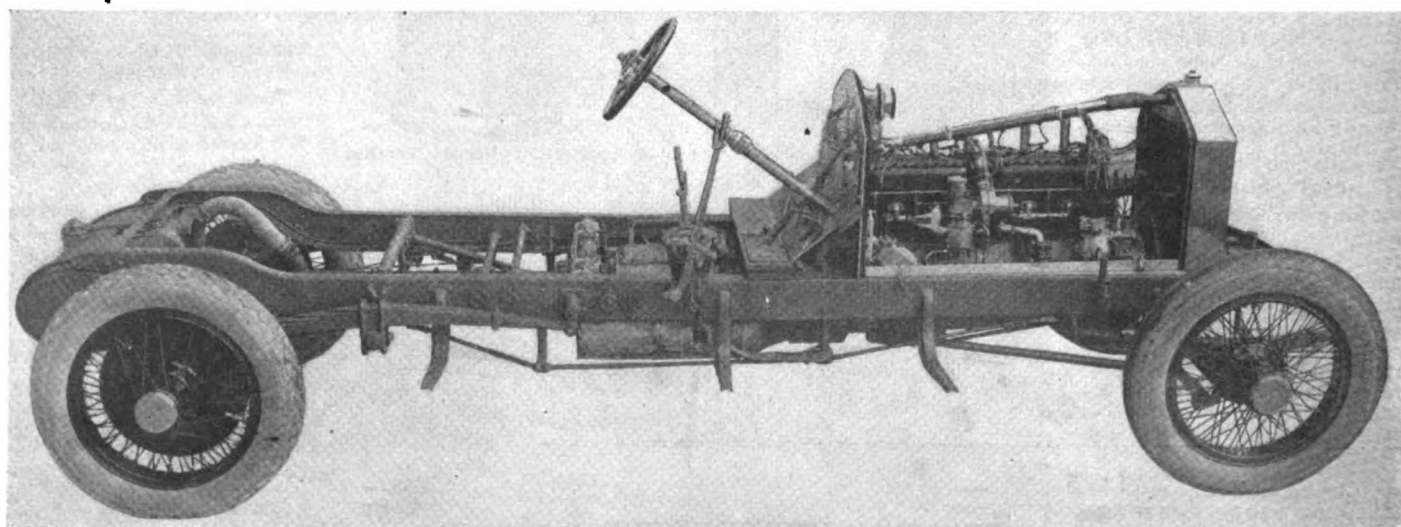
three. The crankshaft is finished all over and the bearings are lapped after grinding. The engine is supported in the frame by a flexible four-point support in such a manner that the front end of the engine rests on two bell cranks, one arm of which is connected to the frame bracket, and the other two arms connected by a tie rod.

Aluminum alloy pistons are used, and side slap and seizing is prevented by a slitting arrangement. There are four rings and these are "pinned" with bolts which go through the piston wall with nuts on the inside. The valve mechanism uses a pivoted rocker lever between the cams and the push rods to take up side thrust.

The engine is fitted with a vibration damper which relieves the crankshaft of torsional vibration. It is in the form of a friction-retained flywheel at the forward end of the crankshaft. The timing gear is driven through the interposition of springs also.

The carburetor is of the double-nozzle type and has a piston type of throttle valve. At idling and low speeds only one nozzle is operative. The automatic air valve controls not only the amount of air admitted to the carburetor, but also the vacuum, and, therefore, the cutting-in point of the high-speed nozzle. A limited range of adjustment on both nozzles is obtainable from the driver's seat, and the intake is provided with a muffler.

The oil pump is of the gear type and has the pressure relief valve formed



Chassis of the American Rolls-Royce

integral with it. It is driven through a square tube, which opens up in case the pump becomes jammed by foreign matter. The water pump, of the usual centrifugal type, has the peculiarity that water enters the casing from both sides. It is driven through a universal joint. Fuel feed is by air pressure, and the air pump is mounted on the governor casing and driven from the governor shaft. This pump is so designed that the pressure is automatically limited to 2 lb., so that no relief valve is required.

Engine is Governed

A governor on passenger car engines is a rarity, but the Rolls-Royce is fitted with one. It acts on the throttle valve and is under the control of a lever on the steering column. When the accelerator pedal is depressed the action of the throttle ceases. The advantages claimed for the use of a governor are as follows: In coasting downhill, if the governor is set to, say 10 m.p.h., the governor will hold the throttle closed as long as the car exceeds this speed and thus save fuel. When driving in traffic the engine can be allowed to idle at a very low speed, for the governor will open the throttle immediately the clutch is engaged and keep the engine from stalling. In gear changing, especially changing down, the governor is useful in setting the speed at which the engine should run when the clutch is disengaged.

Engine lubrication is entirely by force feed, the pressure being maintained between 3 and 20 lb. Under normal conditions the cylinders are oiled by the spray from the crankshaft, but when the throttle is more than two-thirds opened by the accelerator pedal an oil valve controlling a direct feed from the pressure system to the cylinders is automatically opened by the accelerator, and the cylinders then receive an extra supply of oil.

Two entirely separate systems of ignition are provided, one a Watford high-tension magneto and the other a battery system made by the Rolls-Royce firm. Both are controlled by a compound switch located at the base of the steering column and operated by a knurled nut at the center of the steering wheel.

To eliminate chatter in the magneto drive a small spring-leaded brake is provided, which clasps a ground drum on the magneto, thus introducing a slight counter-torque.

The radiator is of the true cellular type and has nickel silver (German silver) top and bottom tanks. It is supported by two ball joints on a cross member of the frame and stayed by a bowed steel strip from the top to the engine. The engine bonnet is of aluminum and provided with a double hinge at each joint.

The flywheel is secured to the flange in the crankshaft by means of tapered bolts fitted into tapered holes. The clutch is of the reversed cone type and has a lining of friction material which is secured to the clutch cone by means of staples, which are said to make a much more secure fastening than rivets. Provisions are made for lubricating the

clutch pilot bearing from the engine lubricating systems. The center hole through the crankshaft extends through the clutch pilot, and at the end of the pilot there is a valve, which is automatically opened when the clutch is thrown out, remaining open as long as the clutch is out. In order that not too much oil may get through to the clutch pilot during this period, the oil is forced to pass through a cotton wad. The clutch facing is always steeped in oil. A clutch brake in the form of a spring-controlled fiber pad is provided and presses against a special ring secured to the clutch cone. The position of the fiber pad and the spring lead can be adjusted.

The rear axle is a full-floating design, with a housing built up of forgings comprising large diameter tubes or trumpets. The parts are assembled by means of a large number of square-headed bolts. The final drive is by helical bevel gear. The propeller shaft universal joint is of the ring type, enclosed in a large hollow steel sphere. Both sets of brakes act directly on the rear wheels, but there is a separate drum for each. The inner brake is the hand or emergency and the shoes are fitted with cast iron liners, while the foot or service brake is the

outer one and is lined with Ferode brake lining. The adjustment of the foot brake is very simple. All the operator has to do is to turn a small handwheel at the side of the frame and the adjustment is self-locking. In addition to this adjustment, there are adjustments at the rear axle for both service and emergency brakes.

Wire wheels are used, and though these are made by the Dunlop Co., they embody Rolls-Royce inner and outer hubs. The front springs are half elliptic and are flat under load. Shock-absorbers of Rolls-Royce design are fitted at the front of the chassis. These are of the friction-disk type.

The generator, which is of the Lucas make, is driven from the front of the gear box by a leather link V belt. The belt tension can be adjusted by means of a nut located on the outside of the frame. Voltage control is by the third-brush system.

The starter is located on the left side of the gear box and drives to the secondary shaft of the gear box through a jaw clutch. A planetary gear on the starter, together with another on the gear box, give a total reduction from the starter armature to the crankshaft of 23 to 1.

Kissel Brings Out New Worm Drive Speed Truck



New Kissel 1-ton speed truck

Specifications of Kissel 1-Ton Speed Truck

Capacity—1-Ton.
 Speed—35 m.p.h.
 Price—Stripped chassis, \$1,585.
 Full equipment, \$1,985.
 Engine—Four cylinders $3\frac{1}{2} \times 5\frac{1}{2}$.
 Radiator—Tubular.
 Clutch—Multiple disc.
 Springs—Half elliptic.
 Rear Axle—Timken Worm Drive.
 Tires—34 x 5 pneumatic.
 Wheelbase—140 in.
 Length back of driver's seat—8 ft. 6 in.
 Manufacturer—Kissel Motor Car Co., Hartford, Wis.

IN addition to the four larger truck models, the Kissel Motor Car Co. is now producing a 1-ton speed truck with worm drive rear axle, pneumatic tires and other features allowing it to maintain a maximum speed of 35 m.p.h.

The engine is the same as that used in the general utility $1\frac{1}{2}$ -ton model, this being of the four-cylinder type with bore $3\frac{1}{2}$ in. and stroke of $5\frac{1}{2}$ in.

The dry plate clutch and three-speed gear clutch are in a unit with the engine exactly as in the larger models. The rear axle is a Timken worm drive and the wheelbase is 140 in. The tire size is 34 x 5 in. both front and rear.

The truck is furnished in two different ways. For the stripped chassis and standard equipment without seats but including two oil lamps, tail lamps, jacks, complete set of tools, gasoline tank and pneumatic tires, the price is \$1,585. For chassis and body complete, including all extras such as electric lights and starter, canopy body and top, cord tires and painted complete, the price is \$1,985.

Ford Operates Without Bank Help

FINANCIAL SUPPORT MAY NOT BE NEEDED

Rapid Turnover of Surplus Cars and Inventories Pro- vides Working Capital

DETROIT, March 18—The Ford Motor Co. to-day is employing more than 20,000 men turning out around 3000 cars a day, and is going it alone insofar as finances are concerned. Motor World is able to say positively that Ford is not seeking financial assistance, and for the time being at least is operating successfully without it.

Just how long the company will be able to continue operation without financial help is a matter of conjecture, though it is reasonably certain that the company will ask for a bank loan about the middle of April when the 30-day extension period granted the Ford company by the government for the payment of the first instalment of taxes will have expired. That this money will be available without any delay or controversy also is certain.

The facts in the Ford financial situation are as follows: In January Ford sent to New York for a representative of the New York bankers to come to Detroit to discuss finances. This representative came and the situation was gone over thoroughly. The banker suggested that Ford would need about \$50,000,000. Edsel Ford, however, was of the opinion \$75,000,000 would be required. This, the banker informed them, would be perfectly agreeable or \$100,000,000 if they wanted it.

Ford Selections Approved

The hitch came when as the climax of negotiations, the banker set forth conditions upon which the loan would be made among which was the stipulation that a treasurer must be installed to succeed F. L. Klingensmith who would be satisfactory to the bankers. Ford was asked to name three men which he did, one of whom was W. R. Campbell of the Canadian Ford plant. The bank representative scratched out the name of one man but announced that either Campbell or the third man would be all right. Campbell at that time came over to the Ford plant and remained for more than a month, and it was presumed he would be made treasurer, though he finally has determined not to join the organization.

With the matter of the treasurership settled, it looked like the loan would be made, but Henry Ford balked at one other condition and refused to accept the loan with this other stipulation included. He expressed the determination to go ahead with production without the finan-

cial help, and the bank representative advised him that he felt confident Ford under the circumstances could do this successfully.

This advice was given in view of the fact that Ford had reduced his indebtedness to around \$24,000,000 by the conversion of Liberty Bonds, which had been deposited as collateral to secure that loan. The further fact that Ford cars were selling steadily and that the company was reducing its inventories at a good rate, prompted the banker in offering his suggestion that it would be possible for Ford to operate without financial help at least until this bank indebtedness became due together with the government taxes.

Obligations Due in April

In other words, the proposition was put to Ford exactly this way: His obligations with the extension of time granted by the government would not become due until the middle of April. It was possible for him to operate until that time without financial help. It was also possible that he might meanwhile through extraordinary sales demand, be enabled to make whatever settlement became necessary the middle of April without asking for aid at that time.

In the event, however, that bankers holding Ford notes insisted upon payment when those notes became due again at the same time the government taxes had to be paid, Ford would have at his command as much money as he wanted from the banks on the condition they imposed. It was a simple matter—he could run until his last dollar was gone if such contingency arose, and always had the knowledge that a telegram would bring him any amount of money.

The loan sought in January and the loan that will be made in April—if it is made—was to be at 8½ per cent gross, considered by bankers to be very reasonable. During the negotiations Henry Ford and his son Edsel agreed that they would not take any dividends pending the life of the loan, volunteering this to the bank's representative. The bank indebtedness against the Ford Motor Co. represents notes upon which renewals have been asked five times, it is reported.

Sixth Renewal Possible

It also is said with reasonable assurance that a sixth renewal on a majority of these notes will be possible, though there may be some banks unable to continue the loan and there may be others, which for various reasons, will refuse this sixth renewal. The personal taxes of Henry and Edsel Ford are declared to be negligible when taken in comparison with the other indebtedness.

The situation is, therefore, that Ford
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GOODRICH PLEASED WITH YEAR'S RESULT

Deficit Despite Record Sales Due to Reserve Allowance for Rubber Decline

NEW YORK, March 17—Despite sales by the B. F. Goodrich Co. for 1920 of \$150,007,345, a new high record, there was a deficit of \$921,248 before payment of taxes, inventory depreciation and dividends. After payment of dividends on the common and preferred stock the deficit was \$5,371,792, compared with a surplus after dividends of \$12,657,813 in 1919.

B. G. Worth, president of the company, in his remarks to stockholders, said in part:

"In view of the decline in the market values of crude rubber and fabrics, directors have deemed it advisable to appropriate out of surplus the sum of \$8,000,000 which added to the reserve for contingencies of \$2,000,000 provided out of profits in prior years, leaves a total reserve on Dec. 31, 1920 of \$10,000,000 to cover possible losses on future commitments and contingencies.

"Directors feel that, taking into consideration the depression in the rubber industry during the last half of 1920, operating results shown are satisfactory and the financial position of the company is excellent.

"Plants are in a thoroughly efficient working condition, prepared for any emergency, and it should therefore not be necessary to incur any further expenditures during the current year for additional expansion of fixed properties."

Fisk Resumes in Full

CHICOPEE, MASS., March 18—The Fisk Rubber Co., which has been operating on a three-day schedule since Dec. 1, to-day resumed full time and a wage reduction on both day and piece work was put into effect, which amounts to an average of 10 per cent. About 1600 employees are affected. Increased overhead expenses under the shortened schedule makes the return to full time and wage reduction necessary, the company states.

Northwest Service Men Meet

MINNEAPOLIS, March 18—Members of the Automotive Service Association of the Northwest were addressed at their March meeting by Burdis Anderson of the Sheldon School, on personal service efficiency. Films of the Goodrich plant were shown and a luncheon served amid novel surroundings peculiar to the business.

Congress Ready to Check Dumping

TARIFFS WILL BALK UNFAIR COMPETITION

Will Probably Defeat Proposed Sale of Army Supplies in United States

WASHINGTON, March 18—Congressional leaders have adopted a tentative legislative program for the extra session which will include enactment of an anti-dumping bill with teeth in it. It will be designed to prevent unfair competition by foreigners and undoubtedly will be so phrased that it will put a crimp in the plans of the ambitious Europeans who have proposed to sell in the American market many millions of dollars worth of American made motor vehicles and automotive equipment.

This material was sold by the War Department to the British and French governments with the understanding that it would not be sent back to the United States but it has since been sold to private individuals who propose to take advantage of the present laws and reimport it, duty free, to undersell the American market.

France alone has \$65,000,000 worth of these materials. The Slough Trading Co. of England owns 10,000 American made motor vehicles and has begun their importation into this country. The Keystone Tire & Rubber Co. has bought up nearly all the American army tires in France. A French company also is shipping back American made trucks to be sold at auction. A Portuguese merchant has an option on \$50,000,000 worth of automobile parts and accessories which he wants to sell in the United States.

The anti-dumping law which it is proposed to enact would at least require payment of duty on the difference between the purchase price of this material abroad and the market price in this country. Senator Penrose and Chairman Fordney of the House Ways and Means Committee already have committed themselves to such a measure.

Would Cover Reimported Cars

The effects of the dumping law already have been discussed in Motor World which was informed two weeks ago by Senator Smoot that the bill passed by the House at the first session of the last Congress and amended materially in the Senate would cover the reimportation of motor vehicles.

Congressional leaders had little knowledge of the menace to American industry involved in the reimportation evil until their attention was called to it by the Washington bureau of the Class Journal Co. They grasped the situation quickly and their attitude has been entirely sympathetic.

While the anti-dumping bill may be re-introduced in its present form, several Senators and representatives stand ready to offer amendments from the floor. Senator Smoot believes it is essential to stop reimportations at prices less than production costs. It is possible the bill may specifically cover surplus army stocks sold abroad.

Leaders Back Movement

Senator Penrose and Chairman Fordney of the House Ways and Means committee will supplement the measure with an amendment to the tariff law assessing customs at American valuation. Effect of the revision of assessment policies as proposed by Senator Penrose upon the automotive industry is easily noted. For instance, it is reported by the Federal Trade Commission in its report on farm implement trade, that mail order houses have been selling spare parts for automotive products at prices which defy dealer competition.

It is known that certain large mail order houses have their agents operating among foreign manufacturers. These American importers find it possible to obtain prices which, with ocean-freight and duty added, remain below production costs here. The valuation is made at port of shipment and the customs officials abroad have little chance to contest the figures as the manufacturers would have their instructions in this respect. With American valuation restored to the books, importers would be assessed on the wholesale prices of the goods in this country instead of abroad.

A committee comprised of C. C. Hanch, vice-president of the N. A. C. C. and chairman of taxation committee; R. A. Branigan, counsel, and Pyke Johnson, manager of the Washington office, conferred with legislative leaders, here this week on the taxation question. They found a sharp division of opinion as to tax proposals and much uncertainty as to what plan should be considered first.

States Opposed to Car Tax

The committee ascertained that State officials had advised their congressional representatives to consider the effect that a national levy on automobiles would have on State revenues and highway programs. With the various States insisting on State rights and jealously guarding their sources of revenue, it is expected that the Houston proposals for a horse-power tax on automobiles will meet strong opposition in Congress.

Few legislators would commit themselves to the proposed increase in excise taxes. Senate and House committee leaders are split over the sales tax levy. The Hanch committee was advised that the Canadian two-point tax, which hit the manufacturer and wholesaler, was under consideration.

JOBBER LOOK FOR RECORD SALES YEAR

National President Sees Heavy Replacement Business — Urges Better Sales Methods

ATLANTA, March 18—R. A. Stranahan, president of the Champion Spark Plug Co., and of the National Automotive Equipment Jobbers' Association, predicted that there would exist a shortage of motor cars in the United States by May and June of this year, in an address before the Southern Automotive Equipment Jobbers' Association, which held its annual convention in Atlanta, March 11 and 12.

Stranahan declared that Champion business during January and February of this year compared very favorably with the same months in 1920, while advance specifications from dealers and jobbers were better for March of this year than the same month in 1920, and for April of the present year were more than 100 per cent greater than April, 1920. Orders, however, he stated, were still low, not more than one-third or one-half as great as during the same period in 1920. In the sale of manufacturers' equipment he declared that 1921 would fall considerably below the record of 1920, but expressed the belief that the accessory and equipment business as a whole for 1921 would surpass the volume of last year.

Discussing the outlook for the present year from the accessory and equipment standpoint, Stranahan said that replacement business from the 1,900,000 motor cars manufactured in 1920, and the 340,000 trucks, would come this year and therefore every indication pointed to a greater equipment business than in 1920. Probably about 1,200,000 motor cars would be manufactured this year, he said, while there would be a demand for a million and a half.

Dealers Weak on Selling

Stranahan told of a trip by automobile from Florida to Atlanta, declaring that he stopped for oil, gasoline, etc., at about a dozen stations along the route. In each of these stations accessory lines were carried but in not a single instance, he said, did a dealer endeavor to sell him anything in the way of accessories.

"These dealers did not even have the accessories and equipment they carried displayed to advantage," Stranahan said. "That is one of the primary reasons they are not selling accessories or making the money it is possible to make from these lines. Every man who drives his car up to a service station is a possible accessory customer, and if the dealers

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BANK LOSSES RARE IN LOANS TO TRADE

President of Gotham Bank Gives Two Arguments for Extending Credits

NEW YORK, March 17—Henry Bizallion, president of the Gotham National Bank, told Reo dealers of the New York territory in convention here to-day, that they could use two arguments to convince their bankers that their businesses were entitled to loans:

- 1—There is no other class of merchants whose stock is so liquid.
- 2—Cases of loss by bankers who have financed dealers in stocking cars are so rare as to attract wide attention.

The banker said that his wide experience in handling automobile paper had shown that the average dealer's loan on any particular car was usually liquidated in two months in this territory. He said a bank could more safely loan on cars as security up to 90 per cent of their value than on stocks.

Bizallion said that his bank advanced money to dealers on mortgages or bills of sale covering cars at the legal rate of 6 per cent, plus a charge for drawing up the necessary documents, which never exceeded \$2.

The banker said that in the long experience of his institution with automobile financing it had never lost a dollar except in one case of fraud, which he said might happen in any business.

A. G. Welch, assistant manager of the Reo Motor Car Co. of New York, presided at the convention luncheon. R. C. Rueschaw, general sales manager of the Reo company, talked along sales lines and congratulated the dealers on their part of the work, which he said had enabled the factory to operate at full tilt without warehousing cars or trucks.

G. M. C. TO DETERMINE ACTION ON DIVIDENDS

NEW YORK, March 18—Directors of the General Motors Corp. are expected to take dividend action the latter part of this month. There is no intimation whether or not the dividend will be paid, but it is expected to depend largely on the showing made in the next two weeks. If there are indications that the present upward trend in business will continue permanently the payment probably will be made.

It is not probable immediate action will be taken by the corporation on the proposal to fund its bank loans of approximately \$75,000,000 through the issuance of new securities, although the plan has not been abandoned definitely. The position of the company has been materially improved by the large reduction made in its inventory. It can be stated positively that no large additions or improvements to any of the General Motors plants are contemplated.

ST. PAUL TO MAINTAIN USED CAR EXHIBIT

ST. PAUL, March 19 — The Automobile Dealers' Used Car Clearing House, incorporated at \$25,000, will put on a continuous renewed car show. The purpose of the corporation is to enable prospective customers of the used car houses to see a large line of cars in one place, and of different makes and prices, on the same principle that the regular national show gives the best opportunity for looking over new cars. The officers of the corporation are: President, L. C. Roller; vice-presidents, W. T. Haynes and Einar Lee; secretary-treasurer, E. E. Rockhill; manager, H. D. Fenton.

LIBERTY AND CHANDLER ADOPT FINANCE PLANS

NEW YORK, March 17—To a greater extent than ever before motor car manufacturers are having impressed upon them the necessity of financing their dealers, especially in the smaller towns either directly or through automobile financing companies. The list of those which have undertaken this work is steadily expanding.

Among the latest to go into this field is the Liberty Motor Car Co. of Detroit which has begun the financing of its dealers on what is known as the floor plan.

The Chandler Motor Car Co. recently entered into an agreement with the Continental Guaranty Co. of Chicago to finance its dealers and a similar arrangement was made several months ago by Dodge Bros. with the Bankers Commercial Security Co. of this city.

The Maxwell Motors Co. has been financing its dealers for the past two or three months.

Dodge Son Wins Request

DETROIT, March 18—Settlement out of court of the contest instituted by John Duval Dodge to break the will of his father, John F. Dodge, automobile manufacturer, was announced here to-day.

Young Dodge, bequeathed an annuity of approximately \$1,500, is to receive \$2,000,000 of the estate, estimated at \$80,000,000.

SEVENTY-FOUR cars embracing about 34 makes will be displayed at a show which the West Side Automobile Dealers of Chicago will stage at Guyon's Paradise, March 21 to 23. Accessories also will be exhibited. The dealers of this section of the city recently organized in efforts to keep prospects from going into the city proper to do their buying.

URGE CAR CHANGES TO CUT INSURANCE

N. A. C. C. Bulletin Recommends Standard Markings and Integral Locks

NEW YORK, March 17—The insurance committee of the N. A. C. C., of which W. E. Metzger is chairman, has sent a bulletin to its members pointing out that insurance costs to the public are influenced by car design, and urging members to study the schedule of fire hazards. The bulletin says:

"A very substantial item of expense in connection with ownership and operation of an automobile is insurance. The effect of the new plan of grouping cars by name instead of by list price is becoming better known and appreciated by buyers, and our directors' and insurance committee strongly urge that members carefully note the construction features which underwriters consider as bearing directly on the risk attached to the various forms of insurance, not only for the purpose of having each car grouped as favorably as possible, but because makers should aim to keep insurance costs to the public as low as possible.

"These features are listed in the schedule of hazards. The underwriters believe that by means of theft retardants and positive identification marks, manufacturers can assist in reducing insurance losses. For standard marking of frame they offer 7½ per cent, for standard marking of engine block, 7½ per cent, and an additional 5 per cent for both, making 20 per cent when both frame and engine block are so marked. At our last meeting with the underwriters it was decided that the S. A. E. Committee should develop a practicable method of marking frames and engines that will meet the views of the underwriters' laboratories as standard. Members are urged to forward suggestions to the S. A. E.

Paige Gets Big Allowance

"Deductions ranging from 12½ per cent to 20 per cent are allowed for built-in, or integral, approved locking device; the transmission type secures the greatest reduction. It will be noted that the Manual grants an allowance of 20 per cent from theft rate on Paige-Detroit cars. This is because of their built-in transmission lock. In most cities and territories a 15 per cent reduction is made in theft insurance when the car owner buys a lock of an approved type and attaches it to his car; in many cities, if a car is not equipped with an approved lock a flat extra charge of \$15 is made in the theft rate.

"Fire risk is influenced by location of gasoline tanks, their construction, the soundness of the feed system, proximity of carburetor to sparks, the tension and insulation of wiring, exposure of exhaust to drippings, and general workmanship and stability."

TO MOBILIZE TRUCKS IN STRIKE EMERGENCY

Council of National Defense Prepared to Prevent Dis- aster Through Rail Tie-up

WASHINGTON, March 17—Serious thought is being given by the administration to the possibility of a general railroad strike as a result of the announcement by nearly all roads that the wages of all classes of employees will be drastically cut in the interest of economy and in the hope that lower freight rates can be given to stimulate business.

Unofficial, but none the less authoritative, information has reached the White House that if the pay of their members is reduced, the four great brotherhoods will advocate a strike in opposition to such a program. While it is the general belief that if there were such a strike it would be of brief duration, the Council of National Defense is preparing for a mobilization of the motorized transport to prevent suffering and economic disaster throughout the country. It is known that the council has devised a plan for the allocation of motor trucks.

In the last transport crisis when the brotherhoods threatened to quit, the Council of National Defense asked the various Governors to obtain data as to the character, capacity, ownership and location of motor trucks throughout the State. The Governors in turn addressed communications to the municipal authorities asking for their co-operation in obtaining pledge cars from direct owners in the local zones.

Recommend Trucks for Port

NEW YORK, March 17—The New York Chapter of the American Society of Mechanical Engineers has gone on record in favor of the use of motor trucks for the development of the pretentious harbor development project undertaken by the New York and New Jersey Port and Harbor Commission. The alternative plan suggested by B. F. Cresson, chief engineer of the commission, is the construction of an electrically operated subway system extending all the way around the port through which loaded freight cars would be sent, with distribution points for rapid loading and unloading. It is estimated that such a subway would cost \$280,000,000.

The engineers have taken the position that the same work could be done by trucks at only a fraction of the cost.

N. Y. C. to Try Truck Use

NEW YORK, March 19—An interesting experiment in the store door delivery of express matter will be undertaken this week by the New York Central Railroad Co. in co-operation with the American Railway Express Co. The plan will be put in operation first in Chicago and Cleveland, and standardized trucks will be used in its development. A. H. Smith,



Indianapolis Is "Cautiously Optimistic"

Merchants and bankers gave the Indianapolis show excellent support and it resulted in a trade stimulant that brought a decided boom in the automotive trades and in all lines of business. The attendance was larger than any previous exhibit, especially from the rural districts. There was more elaborate promotion and decoration in Indianapolis this year—and more sales. A popular feature was the naming of special nights at which local organizations took charge of the entertainment. The Optimist Club was in charge the first night. The American Club, Kiwanis and Rotary Clubs also had special nights. Five hundred dealers of the territory attended the state dealers' meeting.

president of the New York Central, has been much impressed with the possibilities of the motor truck as an auxiliary to the railroad.

After careful consideration of the subject, his engineers recommended the construction of special express cars which would carry nine steel containers uniform in size, which could be loaded from the trucks at the point of origin and unloaded to trucks at the destination.

HARVESTER AND CASE CUT TRACTOR PRICES

CHICAGO, March 17—In anticipation of lower production costs, the International Harvester Co. has made the following reduction in tractor prices:

Titan 10-20	\$200
International 8-16	150
International 15-30	350

In addition, reductions ranging from 10 to 15 per cent of the wholesale price have been made on about one-third of the line of implements and machinery manufactured by this company.

A reduction of 15 per cent has been made by the J. I. Case Plow Works. This cut applies to all the products of this company, including tractors and other power farming machinery.

Samson Tractors Reduced

JANESVILLE, WIS., March 19—J. A. Craig, president of the Samson Tractor Co., a subsidiary of the General Motors Corp., has announced a 20 per cent reduction in the price of tractors and a 10 per cent cut in the price of power harrows and plows.

STUDEBAKER LOOKS FOR INCREASE OVER 1920

SOUTH BEND, IND., March 18—"If general conditions become no worse than they are now our business should almost certainly exceed that of last year," was the assertion made by A. R. Erskine, president of the Studebaker Corp. in presenting the annual report to the stockholders. The report shows net profits of \$9,822,854 after deductions of Federal taxes, depreciation and other fixed charges. This was equivalent to \$15.18 a share on the \$60,000,000 of common stock compared with \$20.69 on a share on the \$45,000,000 of common stock outstanding at the close of 1919. Gross sales for 1920 exceeded any other year in the history of the company.

In his statement concerning the outlook for 1921, President Erskine says:

"The demand for Studebaker cars is quite heavy from all sections of the country, except in a few spots, and in a number of places is double and treble what it was last spring. March sales probably will exceed 5000 cars. Manufacturing schedules call for 5235 cars in March, 5440 in April, 7015 in May, and 7320 in June, with production proceeding nicely and under economic conditions."

To Hold More Army Sales

WASHINGTON, March 18—Sales of surplus army automotive material, similar to the one held at Camp Holabird, Baltimore, will be held at Camp Jessup, Atlanta, the week beginning April 4; at Camp Normoylen, San Antonio, Tex., April 11; at El Paso, Tex., April 18; at Jeffersonville, Ind., April 25, and at Schenectady, N. Y., May 1.

MINNEAPOLIS FINDS SALES CLOUD LIFTING

Pence Company Disposes of \$500,000 Train of Buicks —Truck Outlook Good

MINNEAPOLIS, March 21 — While generally speaking there is only a slight lifting of the sales cloud situation, one optimistic note is struck in the receipt by the Pence Automobile Co., which buys Buicks for a large territory and distributes on its own account, of a trainload of cars, the first time this train has moved its wheels for four months. The Pence company owns two trains and this one was composed of 76 cars, four automobiles to a car, which cost the firm just \$411,139.20. Upon arrival of the train the company had just 30 cars left in the house.

It is the opinion of this firm that the savings bank increased deposits show that the people have the money to buy automobiles. This firm's retail sales have looked up. However, generally speaking, the country situation does not seem much improved from a financial viewpoint, as to motor car purchases. In the twin cities retail sales have improved some with the mild weather, but a large percentage of these are from car owners and involving trades.

The new business does not seem to be appreciable. In trucks there promises to be a better business. In fact inquiry is good, but the basis of the hope for better business is the quantity of trucks that will be required by contractors who get their bids accepted for road construction under the Babcock law, adopted by popular vote at the general election in Minnesota.

Another note of interest is resumption of operation by the Minneapolis assembling plant of the Ford company. The rate of assembly reached this week is 250 cars per day. The branch reports 3500 orders of cars for March delivery in Minnesota, northern Wisconsin and eastern South Dakota. For April this is 6000 cars. These are larger than a year ago. Dealers' stocks are said to be about cleaned up.

CLEVELAND FINDS MARCH NEW TOP-NOTCH MONTH

CLEVELAND, March 18—The driving force put behind sales promotion work by dealers and their corps of salesmen has enabled the automobile men to keep retail business on the increase since the latter part of January.

The big drive on the part of dealers in used cars to dispose of large stocks that they took on before the first of the year, has to an extent been a detriment to the sales of new cars, but everybody in the business seems to be moving forward from the standpoint of sales.

March has been a better month for the dealer here than was February. In fact, several dealers visited asserted they already had sold as many cars this month as they did in all February.

HULETT MOTORS SELL USED CARS AT HOME

NEW YORK, March 18—It is rumored that there is no such thing as a market for used cars in New York, but the Hulett Motor Car Co., Chandler and Cleveland dealer, does not know it. W. O. Wilson, head of the used car department, has a trained staff of men to sell used cars as articles of the highest integrity, and an extensive canvass on that basis, which has been kept up right through the winter, resulted in a February business far ahead of last year's and in a March business to date which is just a little better than that of a year ago.

The Hulett company reconditions all Chandler and Cleveland cars. It sells some other cars "as is," but gives prospective buyers full information as to their condition.

WEST VIRGINIA SHOW BRINGS TRADE PROMISE

WHEELING, W. VA., March 18—With its industries greatly diversified, this city has boasted during the industrial depression that it has felt it less than any other city in the country and this has not only kept the automobile business moving but it augurs well for the business during the coming season.

In fact, the sales season opened most auspiciously with the third annual show under the auspices of the Wheeling Automobile Dealers Association in the Market Auditorium, March 10, 11 and 12. Practically all exhibitors reported sales and the inquiries were heavy.

Business has not only kept going in Wheeling, and in the big industrial district of which it is the center, but business is on the eve of a great boom. One huge mill, the Riverside plant of the National Tube Co., employing close to 4000 men, has never halted operations for a moment.

Dealers are of one opinion in anticipation of the greatest year for automobiles. Never was there so much interest in an automobile show, and never so many inquiries and so many sales.

SUBSTANTIATING optimistic reports of improvement in the truck industry, the Commerce Motor Car Co. reports that one road man brought in this week orders for 30 trucks from the Ohio territory, including 13 from Cleveland, nine from Columbus and six from Toledo. Factory production schedules are being increased daily and officers of the company declare prospects are bright for restoration of a normal pre-war business by May 1.

"CALL OF THE ROAD" SOUNDED ON COAST

San Francisco Dealers Spring New Sales Move and Are Developing Business

NEW YORK, March 21—A thirty days' outdoor advertising campaign to stimulate sales has been begun by the San Francisco Automobile Dealers Association. One of the big billboard companies, operating in many Coast cities, has donated the use of some of its boards for a month, from March to April 15, and on these are carried 24-sheet posters telling pictorially and in brief sentences the story of the automobile under the heading, "The Call of the Open Road. Are You Prepared?"

The San Francisco dealers already have the co-operation of dealers in other cities, and it is planned to show the poster in 1500 cities and villages in the Pacific States. It is also planned to use 5000 cards, replicas of the posters, which will be hung in dealers' and garagemen's windows and in windows of department and other stores which sell motor apparel.

The newspapers are co-operating with special displays in the automobile sections and the idea of "The Call of the Road" is getting wide attention and helping to get spring business under way.

Bethlehem Show Stirs Sales

BETHLEHEM, PA., March 19—With 25 per cent more sales on the floor than last year and a volume of prospects that promises good spring business, automotive dealers in this territory found much encouragement in the Lehigh Valley Automobile Show in the Coliseum Building. The show made a strong merchandising appeal, and much to the gratification of the truck and tractor dealers the inquiries at these booths indicated widespread interest in these products, which is expected to develop into an appreciable sales volume later in the spring.

Oklahoma Space Sold

OKLAHOMA CITY, March 18—Seventy-five per cent of the space for the Oklahoma City dealers' automobile show has been disposed of with the remainder going fast. All of the distributors of the city are planning to bring their dealers in for a visit to the show, and they will be entertained at a dinner to be given by the Oklahoma City Motor Car Dealers Association on one of the show week nights.

Durant Not After Studebaker

NEW YORK, March 17—Formal denial has been made by W. C. Durant that he is seeking control of the Studebaker Corp. to make it the nucleus for Durant Motors, Inc. The reports became current when Durant bought a large amount of Studebaker stock in the market.

SALES IN SOUTH WAIT DECISION ON CROPS

Big Boom for Tractors Expected When Diversification Program Is Determined

ATLANTA, March 19—While it is the opinion among tractor distributors of the Atlanta territory that the crisis in this section has been passed so far as the tractor industry is concerned and that sales are experiencing a gradual improvement, still the total volume of business is below the normal mark and that condition appears likely to exist until the readjustment period has become a thing of the past.

One of the primary reasons distributors in this section are finding tractor sales rather few and far between at the present time lies in the fact that many of the dealers, specially those in the smaller towns, have strained their credit almost to the breaking point. Fred Cameron, of the John Deere Plow Co.'s Atlanta branch, in a recent trip through South Georgia and the Carolinas found that many of the smaller dealers were almost up against the wall. They were unable to make substantial payments on their accounts because they have not been selling enough tractors the past few months to even take care of their incidental expenses.

Because of the declines in the prices of their products the farmers haven't the money with which to buy tractors now, and they are unable to obtain additional credit from their bankers in most cases because they are already under heavy obligations. This is the unfavorable condition against which the dealers are working in their efforts to sell tractors. Until that condition experiences material improvement the industry cannot get back to normalcy.

In January the tractor business in the Southeast was really at a standstill, but during February a few sales were made. March has been about on a par with February, but a gradual increase in business is noted and there is a better feeling among the distributors and dealers than there has been for several months. During April and May they are anticipating a much larger volume, and when it is definitely known just what the South will do this year in the way of cotton acreage reduction, a big demand for tractors is foreseen.

Garrett Fort Worth Head

FORT WORTH, TEXAS, March 17—With civic as well as business ideas to develop, Percy Garrett, dealer, has assumed the presidency of the Fort Worth Automotive Trades Association and is in charge of the second annual spring show.

Garrett was elected president, March 5. In addition to discussing current business problems, the trades association is also co-operating with the local owners club in highway marking and with the county commissioners in the construction of \$2,450,000 worth of new roads.

THE SAWDUST TRAIL LEADS WAY TO SALES

FAIRMONT, W. VA., March 18—Billy Sunday's Tabernacle here has housed its first show and, like the revival, the show was a big rousing success.

There was a large number of sales, mostly to farmers, which was unusual considering that Fairmont is the center of a large coal mining area and is also rather noted as an industrial site. A large percentage of the 50,000 persons attending the show were agriculturists and there was a better than average sale of tractors.

The Huntington show, held at about the same time as the Fairmont show, also scored as a producer of sales.

FORT WAYNE TOLD WORLD ANNUAL SHOW WAS ON

FORT WAYNE, IND., March 18—Although this year's show of the Fort Wayne Automotive Trade Association was held at the far eastern end of the city in the gymnasium of Concordia College, the affair was very largely attended and a satisfactory number of sales were made at the show by the 23 dealers participating in the event. The gymnasium was elaborately decorated and lighted for the affair. Twenty-five cents admission fee was charged.

Features of the affair were the way in which it was promoted by the live-wire committees and executive officers. Each evening before the opening of the show a band concert was held at the court house in the center of town and a parade was then started to the show with the band in automobiles and with the automobiles of the dealers following closely. On the opening night, too, there was a display of red fire, ringing of cow bells, blowing of horns, etc., which let everyone in the city know that the affair was on.

Previous to the opening of the show the dealers advertised the event extensively in their regular newspaper space and the automobile trade association also did a lot of advertising for it. Then on the Saturday and Sunday before the opening of the show the local newspapers got out sixteen and twenty-page automobile sections in which the dealers advertised heavily and in which the newspapers played up features connected with the show and with motoring.

MONMOUTH'S (Ill.) recent automobile show did much to revive business in this locality, dealers report, and spring business is expected to be close to normal. One firm during the past week sold six tractors. Another reported sale of two trucks.

TABER SELLS CARS IN TRAINLOAD LOTS

No Dearth of Business When Gone After, He Declares—Needs Application

HARTFORD, CONN., March 21—Russell P. Taber, Inc., Reo distributor, finds business so good that it is necessary to receive cars by the trainload. There is now in transit from the Reo factory to the Hartford dealer a trainload of Reos made up as follows: 36 speed wagons, 34 touring cars, 10 roadsters, eight sedans and four coupes. It will take 31 freight cars to convey this big order to the Reo distributor. Trainloads, by the way, are nothing out of the ordinary for the house of Taber, for at this season of the year the trainload shipment is the rule.

This big shipment is in addition to the regular February allotment of 50 cars, which were all sold. The company has bonafide orders for 88 of the cars in the trainload, which is 35 cars in excess of the March allotment. Russell P. Taber, head of the organization, is endeavoring to get a further increase in the March shipments. The stock on hand is away below normal. During the past winter the sales force has made a big drive on speed wagons and passenger cars and it is a fact that while competing houses complained of a lack of business the Taber force was on its toes after the business and proved conclusively that there was business if one would but go after it.

The Taber organization controls nearly all of Connecticut on the Reo and has many sub-dealers who do not figure in the trainload shipment. During the past month the firm has had many carloads of automobiles shipped direct to the sub-dealers, so that they never come into Hartford at all. There has been a particularly lively demand for open cars and for speed wagons, which is significant, as other dealers locally pronounce the truck game as quite dead. In speaking of the trainload shipment, Taber said:

Will Require Another Trainload

"We have many orders on the books for delivery before the first of April. We expect the trainload shipment in by the 24th of the present month at the latest. Our orders ahead will require another big shipment by the middle of April. The business has opened up well this season and we have every reason to believe that we will make a new record in 1921.

"It really amuses me to hear the report that there is no business. No one handed us these orders on a gold platter; we simply went out and got them. Cars can be sold but it requires steady application. My instruction to the sales force is to get out and gather in the orders. Our methods are simple, merely application. We expect every salesman to make good and he does make good."

LEGISLATIVE SEASON MAKES FEW CHANGES

Increased Registration Fees Prove Not Exorbitant— Drastic Bills Fail

NEW YORK, March 18—Automobile legislation which has been introduced in the 40 State legislatures which began their sessions early this year is being sorted out and assimilated. Thirteen of the legislatures already have adjourned. It is estimated that approximately 1500 bills have been introduced in the 40 States. Almost the same number were introduced last year in less than half as many States.

Increases in registration fees have been proposed in 34 States. Generally speaking, they apply to commercial vehicles rather than passenger cars. In most States these fees are used for the maintenance of highways, but in a few cases it is proposed to expend them for actual building of roads. The increases proposed vary widely, but the industry has been gratified to note that in several States they follow closely the tax suggested in the proposed uniform motor vehicle law.

Automotive interests are not disposed to combat seriously what they consider a reasonable increase on the theory that while they will benefit directly through improved highways all the tax payers in the State will benefit indirectly. It is significant of the trend of legislation, however, that there is a tendency to increase these fees each year.

Other subjects dealt with most generally in proposed legislation are size, weight and speed restrictions, obligatory equipment, indemnity bonds as a prerequisite to registration, stoppage at grade crossings, licensing of automobile

mechanics, classification of freight and passenger carrying motor lines as common carriers, and a tax on the consumption of gasoline.

As a general rule, gasoline taxes, indemnity bonds and grade crossing stops are not meeting with general favor. Gasoline taxes were proposed in 12 States, but already have been killed in four or five and have not much chance of passage in the others.

Measures providing for indemnity bonds have been introduced in 15 States, but have been killed in several and are making little progress in the others. Measures for the licensing of automobile mechanics have been introduced in 10 States, but have been killed in four.

MONTANA INCREASES REGISTRATION FEES

HELENA, MONT., March 18—For the next two years at least Montana motorists will pay 50 per cent higher licenses for motor vehicles than were paid in the last six years in compliance with the law, passed by Assembly just closed, and approved by Governor Dixon. In order to avoid extra bookkeeping and consequent misunderstandings, no motor vehicle licenses were issued during the months of January and February.

Under the new law all cars which formerly were licensed at \$10 will now pay \$15 a year, except the higher powered cars, which now require a license costing \$22.50. Dealers licenses have gone up to \$75 a year.

The new rates are:

Not over 23 horsepower.....	\$7.50
From 23 to 37 horsepower.....	15.00
Over 37 horsepower.....	22.50
Electric passenger vehicles.....	15.00
Motor trucks:	
One ton or less.....	10.00
Over one and not over two.....	22.50
Over two and not over three....	37.50
Over three tons.....	60.00

An Attractive Salesroom



Walls of multi-colored brick make the salesroom of L. F. Wentzel, Dodge Bros. dealer in Aurora, Ill., unusually attractive

OREGON INCREASES GAS AND CAR TAXES

License Fees Approved by Sec- retaries of State and Traffic Officials

PORTLAND, ORE., March 18—Under Oregon's new automobile license and traffic law, passed at the regular session of the State Legislature, weight is made the basis for automobile licensing, rather than horsepower, as in the past. The bill, which was originally worked out along lines suggested at a conference of secretaries of State and traffic officials from all over the Pacific Northwest, will go into effect in May, although the new license fee provisions will not be effective until next January, as the licenses are made to correspond with the calendar year.

The new provisions relative to license fees were worked out on the theory that the heavier the car the more damage it does to the road, and motorists should be called upon to pay in proportion to the damage which they inflict in their travel. This feature was made effective further by the imposition of an additional one-cent tax per gallon on all gasoline sold to vehicles using the roads. Gasoline sold for operation in vessels and in tractors and stationary engines will not be taxed.

The new gasoline tax has already gone into effect, having been carried with an emergency clause. There was already a tax of one cent per gallon on gasoline and the additional tax raises it to two cents. This brings the retail price of gasoline in Oregon to 30 cents per gallon. The former price had been 29 cents, and when the tax went into effect the oil companies immediately "passed the buck" to the consumers.

Propose Tax on Gasoline

HARTFORD, March 19—The State of Connecticut proposes to levy a tax of one cent per gallon on gasoline. A hearing was given on the proposed bill by the legislative committee, at which no serious opposition was raised. The measure would net the State an additional revenue of approximately \$720,000, which would be available for road building and betterment.

Little opposition developed at the hearing on the proposition to have the State automobile department collect the property tax on cars at the time of registration.

Traffic Manager Killed

DETROIT, March 18—Roger Hurley, traffic manager of the Maxwell plant of the Maxwell-Chalmers Co., killed himself accidentally yesterday while examining the revolver of an acquaintance. Hurley was 46 years old. He was widely known as a traffic man, having been general agent of the Michigan Central and Cloverleaf railroads before he joined the Maxwell organization.

DUNLOP PRODUCTION TO START APRIL 15

Company Plans to Employ 7000 Men in Tire Manu- facture by 1922

BUFFALO, March 19—Production of tires at the River Road plant of the Dunlop Tire & Rubber Corp. of America will be started April 15.

Nearly 7000 men will be employed at the plant Jan. 1, 1922, of whom 99 per cent will be from Buffalo. R. W. Snow, legal advisor of the company, made the announcement to-day before Chairman Charles E. Hill, of the Upstate Public Service Commission, when the counsel for the tire company urged that the International Railway Co. be allowed to extend its River Road tracks to give transportation to the men employed by the company.

P. D. Saylor, vice-president of the company, said that an office force had been organized and is at work, and that a small working crew is on the job cleaning up and making ready for the resumption of activity.

It is planned to start manufacture this spring and to finish up the constructive work. Saylor said that the key men of the organization have been retained and that all will be in readiness when the time comes for resumption.

Constructive work at the Dunlop plant was suspended the first of the year and nearly the entire staff and corps of men which had been built up during 1920 was taken off. It is understood the company has now arranged its finances and is ready to start operations.

Propose New Insurance Plan

MILWAUKEE, March 18—The Wisconsin Legislature has before it a bill providing that no one shall be issued a license to drive an automobile, motor truck or motorcycle unless there is filed with the application evidence that the owner is carrying a \$1,500 surety bond which will be effective for the full license year; or, automobile compensation and property damage insurance of similar amount.

This is accepted in automobile and insurance circles as the initial step to replace automobile liability insurance in Wisconsin with automobile compensation insurance, along the line of compensation for workmen in industry.

The bill has raised a storm of protest not only from owners but from insurance men who state they do not care to handle the business which would be put up to them under the bill.

Illinois Convention Opens

PEORIA, ILL., March 21—Seventeen automotive trade organizations are represented at the second annual convention of the Illinois Automotive Trade Association which opened in this city to-day. The convention is being held on the first and second days of the Peoria automobile show.

DETROIT SHOW STARTS WITH SIXTY-TWO SALES

DETROIT, March 21—New attendance marks were made at the opening of the Detroit show Saturday. As an indication of the buying interest of the crowd 62 sales were reported to have been made. With an auspicious start such as this dealers look forward to the rest of the week with confidence of big business.

Manufacturers feel that with a scale of business developing such as indicated by this and other late spring shows, the former surplus of cars will soon be exhausted. Factory executives were prominent in the show crowds and followed developments closely.

Dealers from most Michigan cities and also from northern Ohio and Indiana are among the show visitors. Special meetings of these will be held by distributors at which preparations for spring sales will be detailed.

DODGE RESUMES WORK WITH 4000 EMPLOYEES

DETROIT, March 21—About 4000 of the normal force of 22,000 employed at Dodge Brothers, resumed work to-day on a schedule conforming with sales requirements which is expected to be steadily increased.

Arthur T. Waterfall, general manager, said that the company would make no statement regarding the actual number of men to be employed at the start nor the probable production. The report that the company would put on a night shift was denied by officials who declared they were just feeling their way and that future activities would depend entirely on demand.

The resumption of operations indicates that the car surplus is being rapidly absorbed.

Hanson Reduces Prices

ATLANTA, March 17—Prices on Hanson open car models have been reduced to take effect immediately. The 5-passenger touring and roadster are reduced to \$2,185 from \$2,365, and the 4-passenger sport model is reduced to \$2,285 from \$2,465. The price on the sedan remains at \$3,165.

WILLYS' COAST HOME BOUGHT BY CHRYSLER

DETROIT, March 18—Announcement has been made in Toledo that John N. Willys has sold his home at Pasadena, Cal., to Walter P. Chrysler for a sum approximating \$200,000. Chrysler is executive vice-president of the Willys corporation.

CHEVROLET OFFERS REFUND ON SALES

Will Make Large Return If Pur- chasers Take 50,000 Cars by July 31

NEW YORK, March 21—As a special inducement to prospective buyers to come into the market at once, the Chevrolet Motor Co. has announced a refund of from \$70 to \$100 on its several models, providing sales between Jan. 1 and July 31 equal the 50,000 production schedule which the company has outlined for this period.

List prices of models and the amount of reduction under the proposed plan are:

Roadster and touring, \$795; refund \$70; light delivery wagon, \$820, refund \$70; chassis, \$770, refund \$70; coupe, \$1325, refund \$100; sedan, \$1375, refund \$100.

According to the announcement the refund represents savings in material prices under present readjusted conditions, which savings can be made provided Chevrolet factories continue to operate on the estimated average quantity production basis. It is in keeping with the Chevrolet policy, it declares, to make the price of its product as low as quality manufacture on a large scale will permit.

Fifty thousand cars is the minimum, the company says, which its engineers estimate will secure substantial savings in cost in manufacture. Purchasers under the plan will receive a certificate from dealers which will be redeemed as indicated on its face. Production results will be announced about August 10.

HANCH TAKES PLACE AS BUSINESS COUNSEL

NEW YORK, March 19—Charles C. Hanch, vice-president of the National Automobile Chamber of Commerce and chairman of both the chamber's taxation and patents committees, has become associated in an official capacity with the Homer McKee Advertising Co. of Indianapolis as general business counsel.

Hanch was for nineteen years treasurer of Nordyke & Marmon Co., later treasurer of the Studebaker Corp. for years, and at another time general manager of the Maxwell-Chalmers companies.

During the war he was chief of the Automotive Products Section of the War Industries Board at Washington. After the armistice he was sent abroad by the Bureau of Foreign and Domestic Commerce of the U. S. Department of Commerce to study commercial and industrial conditions in the Allied countries.

One of Hanch's most notable accomplishments affecting the automobile industry was the initiating of the movement that finally brought about the cross licensing patent agreement among American automobile manufacturers.

ASSOCIATION ACTIVITIES

Hay New Chicago President

CHICAGO, March 18—Thomas J. Hay, pioneer automobile dealer of this city and one of the earliest presidents of the Chicago Automobile Trades Association, was elected president of the association at the annual meeting here this week. John Nicol was chosen vice-president; R. C. Cook, secretary, and W. J. Boone, treasurer. The directors are Leo A. Peil, James Levy and Ward S. Perry, who are hold-overs, and Jay A. Colvin and E. J. Kilborn, elected for two years.

A dinner at the Congress Hotel was held in conjunction with the annual meeting, Peil, outgoing president, acting as toastmaster. A resume of the work of the association for the past year was made by him. Hay spoke on "The Association." Other speakers were John W. O'Leary, vice-president of the Chicago Trust Co., who told of "Conditions Confronting Us To-day," and Mayor William Hale Thompson, who discussed the "Pageant of Progress," which will be held on the Municipal Pier here from July 30 to Aug. 14, and for which a number of automobile manufacturers have taken space.

There was also an interesting vaudeville program in connection with the dinner.

Atlanta Plans Show Site

ATLANTA, March 18—Because of the remarkable success of the Great Southern Automobile Show, the Atlanta Automobile Dealers Association has made preliminary plans for the building of a specially constructed exhibition hall to house the automobile show of 1922, and if large enough to take care of the shows for years to come. While the Atlanta Auditorium is the largest building of its nature in the South, it was far too small for the enormous crowds which attended this year's show, and 30,000 feet of additional floor space could have been disposed of.

A site for an exhibition building in downtown Atlanta is already in view, and a local capitalist has agreed to finance the work if it is approved by the Atlanta association. John S. Lott-ridge, president of the association, stated that a committee would be appointed to go into the matter and that the exhibition building would undoubtedly be constructed in time for the 1922 show.

Gets Favorable Legislation

TOPEKA, KAN., March 17—The legislative committee of the Automobile Trades Association of Kansas has just submitted a bulletin to the membership in which it outlines work accomplished at the present session of legislature, especially that connected with the new motor vehicle law. Through its activity the proposed dealers fee was reduced

from \$50 to \$25. An amendment was obtained which permitted transferring the original engine number when a new block was installed. Reductions in the passenger car licenses were obtained and the proposed truck licenses were reduced from a scale of fees ranging from \$15 to \$3,000 to \$15 to \$100. The committee declares it to be a pretty good law as it now stands.

Wisconsin Tire Body Formed

MILWAUKEE, March 21—The Milwaukee Tire Dealers Association was formally organized at a meeting of nearly 250 men engaged in the tire and repair business held at the Hotel Pfister in Milwaukee on March 14. Officers were elected as follows: President, J. B. Cudlip, Oshkosh, Wis.; vice-president, Henry O. Stenzel, Milwaukee; secretary, E. H. Berge, Milwaukee; treasurer, J. E. Thompson, Milwaukee; directors, F. F. Pope, Fond du Lac; H. A. Schwalbe, Sheboygan; H. G. Edwards, Madison; W. E. Gnatzig, Whitewater; A. Zanders, Merrill.

The State association is a development of the effective work accomplished by organized activity in Milwaukee by the Milwaukee Tire Dealers Association. This body grew out of a war-time organization of a voluntary character, designed to effect conservation to help win the war. Steps for the formation of a national association of tire dealers also have grown out of the work in Milwaukee.

At the State organization meeting, President M. L. O'Brien of the local association gave the address of welcome. James A. Fetterly, editor of Wisconsin *Motorist*, spoke on organization. In the afternoon, Phil A. Grau, executive director of the Milwaukee Association of Commerce, delivered an address. Following the election of officers, President Cudlip presented a program of work for the first year, enunciating the purpose of the association. A semi-annual convention will be held in Milwaukee during State Fair week.

Ontario Dealers Convene

TORONTO, March 17—The fourth annual convention of the Automotive Dealers Section, Ontario Branch, of the Retail Merchants Association of Canada, was held in the Prince George Hotel, Tuesday and Wednesday, March 15 and 16. An excellent program was arranged and there was a record breaking attendance of delegates from all points in the province. As business is rapidly returning to normal, the trade and industry are looking forward optimistically. An exhibit of automotive equipment, including tires, was held in conjunction with the convention.

Lathrop New London Head

NEW LONDON, CONN., March 17—Thornton N. M. Lathrop was elected

president of New London Automobile Dealers Association at the annual meeting held here this week. J. P. Sullivan was named vice-president; Roy R. Palmer, secretary, and R. C. Smith, treasurer. Final plans for the annual exhibit, from the 23rd to the 26th inclusive, at the State armory, were discussed. It was reported that at least 50 cars of different makes will be exhibited and that, but for the limited space available, the number would be doubled. The association claims the exhibit will be the largest in eastern Connecticut. The decorations will be a feature.

Philadelphia Names Officers

PHILADELPHIA, March 18—Louis C. Block was re-elected president of the Philadelphia Automobile Trades Association at the annual election of the organization. Other officers were chosen as follows: Harry B. Harper, vice-president; Walter G. Herbert, secretary, and J. E. Gomery, treasurer. The last mentioned was re-elected. These members were added to the board of directors, three of them having served last year: A. E. Maltby, L. S. Bowers, W. Y. Anthony, J. R. Pierpont and James Sweeten.

Columbus Elects Directors

COLUMBUS, March 19—The Columbus Automobile Trades Association at its annual meeting held at the Chittenden Hotel elected the following directors: Don Cole, R. H. Mitchell and H. L. McCord of the motor car division; E. C. Brisley and A. B. Coates of the motor truck division; Fred Woolsey and J. P. Gordon of the tire and accessory division, and R. L. Hayes and J. H. Johnston of the garage and repair division. H. L. McCord was elected president; Arthur I. Fishbaugh, vice-president; E. C. Brisley, secretary and treasurer, and J. T. Milar, manager.

Shaw Indiana Manager

YOUNGSTOWN, OHIO, March 19—Resignation of L. M. Shaw as secretary-manager of the Youngstown Automobile Dealers Association becomes effective today. Shaw leaves the local organization to become executive secretary of the Indiana Automotive Trades Association, headquarters in Indianapolis. He assumes his new duties March 21. He is succeeded in the Youngstown office by D. C. Barnett, formerly a field secretary of the National Automobile Dealers Association.

Lewistown Officers Chosen

LEWISTOWN, PA., March 18—The Lewistown Automobile Trades Association has announced that it will hold its fifth annual show in Market House Hall on March 31 and April 1 and 2. The association elected the following officers: R. B. Montgomery, president; O. O. Orner, secretary, and P. M. Headings, treasurer.

CHANGES IN THE TRADE

Scott Automotive Service, Kalamazoo, Mich., has taken the agency for the White truck.

Paul & Westlake, Kalamazoo, Mich., is a new agency concern formed to handle the complete Dort line.

Ogden Avenue Garage Co., Milwaukee, has been appointed distributor of the Hanson in Wisconsin and upper Michigan.

William Morris, Jr., has obtained a contract to handle Lee tires for the Automobile Equipment Co., Scranton, Pa., of which he is general manager.

F. C. Vanderhoof, formerly engaged in the automobile business in Philadelphia, has returned to the city as sales manager of the Maxwell Chalmers Sales Corp.

J. J. Cavanaugh of the sales department of the Saxon Motor Car Co. of Des Moines, has become associated with the Laster Motor Co., as a salesman.

C. L. Smith Co. of South Bend, Ind., has established a branch office in the Guldenzopf Building, Milan, Ill., and will represent local dealers in handling tires and accessories.

Grove-Packer Motor Co., Harrisburg, Pa., has been appointed distributor in that territory for Paige automobiles. W. P. Grove and Russel Packer comprise the new firm.

Anderson Motor Co., Monmouth, Ill., has been given agency for the Comet Motor Car Co. in Warren, Henderson and Mercer counties. The Comet is manufactured in Decatur.

George T. Hughes has resigned from the Scranton, Pa., representation of the B. F. Goodrich Rubber Co. and has opened a cord tire and mechanical rubber goods store in that city.

Pennsylvania Motor Club, Inc., Lancaster, Pa., has been appointed distributor for the Traffic truck in Lancaster County. This organization maintains branches at the larger points of the county.

Zelchert Sales Co., Milwaukee, has taken over the exclusive distribution of the Laursen automatic gearshift in Wisconsin. It is made by the United States Gearshift Co. of Eau Claire, Wis.

Palmer Brainard, Hartford, Conn., has resigned from the sales force of the Bowman Motor Car Co. to become manager of the automotive electrical department of the Electrical Contractors Corp. of Waterbury.

Oldsmobile Sales Co. has been incorporated in Cedar Rapids, Iowa. H. W. Little of Manchester and H. J. Fox of Fairfax, both well known automotive men in Iowa, having taken hold of the business. They purchased the establishment from A. A. Ake.

Charles C. de B. Aumond has taken over the duties of sales manager with the Dixon Motors, Ltd., Ottawa. Before going overseas he was with Pope-Hartford, Montreal, and after his return was associated with Ginsberg Motor Co., Montreal, selling Studebaker cars.

C. B. Amorous has resigned as Chicago branch manager of Hare's Motors, Inc., to become associated with the manufacturers of the Daniels car, the Daniels Motor Car Co. at Reading, Pa. He will be succeeded by H. S. Norton, formerly special representative of Hare's Motors.

Albert F. Werner Co., Chicago, has been appointed distributor of Seneca cars for the territory adjacent to Chicago by the Seneca Motor Car Co. of Fostoria, Ohio. This is a move on the part of the manufacturers to

perfect a more general distributor organization in the larger cities of the country.

James L. Covert and H. W. Declus have been appointed wholesale representatives for the Flexo department of the Hudson Motor Specialties Co. in Pennsylvania. H. S. Nicholson has been appointed wholesale representative in the New England States. George F. Tornsey has been appointed wholesale representative in Newark, New York and Brooklyn.

Mott-King Motor Co. has been organized and incorporated at Winder, Ga., with \$25,000 capital, by Dr. C. B. Mott, of Troy, Ala., and Dr. Guy King, of Atlanta. The new company has purchased the Ford agency here from Flanigan & Flanigan, and Dr. Mott has taken charge of the business. Dr. King has been consul for the Cuban government in Atlanta for a number of years.

C. W. Lindley and C. I. Thompson, formerly with the Hartford, Conn., branch of the Goodrich company, have organized the Lindley Thompson Co., taking over the former Goodrich quarters. The new firm has assumed the northern Connecticut representation for the Federal tire. William J. Parker, a former Goodrich salesman, has joined the concern as has John L. Richards, who will have charge of the service department.

DON F. WHITTAKER HEADS TRUCK SALES MANAGERS

DETROIT, March 18—Don F. Whittaker has been elected executive secretary of the National Association of Motor Truck Sales Managers, and has assumed charge of the association affairs at headquarters, 1157 Book Building.

Whittaker has been in the motor truck business for several years with the Federal Motor Truck Co. and the Acason Motor Truck Co. He was a charter member of the association and has been active in its work.

Homer Hilton, who has been managing director of the association, has become vice-president and general sales manager of the Winther Motor Truck Co.

The next director's meeting of the association will be held here March 25. Definite action will be taken toward furthering of plans for 1921 under Whittaker's jurisdiction.

Schmelzel Company Changes

ST. PAUL, MINN., March 18—W. H. Schmelzel, president of the W. H. Schmelzel Co., has sold out to his associates and is seeking health in the south. Schmelzel recently was elected president of the Automobile Club of St. Paul, and served two years as president of the Automobile Trades Association. Although in business less than four years the company with a paid capital of \$225,000 has an annual business of \$3,000,000. Schmelzel has been handling the wholesale tractor end of the business, which is a Ford agency company.

The name has been changed to J. W. Hutchins Co. J. W. Hutchins is president; W. E. French is treasurer, and W. S. Williams is secretary. Hutchins has

been vice-president. Up to four years ago he was manager of the Ford branch at Omaha. French up to three years ago was connected with the Ford business in Omaha, Toledo and Detroit. Williams has been secretary two years and is vice-president of the Automobile Trades Association.

REORGANIZE PERSONNEL OF MAXWELL-CHALMERS

DETROIT, March 18—W. M. Anthony treasurer of Maxwell-Chalmers organization, has resigned to take effect to-day. No successor has been appointed, but it is understood Walter Chrysler has selected a man for the post. Anthony, who is 70 years old, has been with Maxwell-Chalmers a long time and his retirement, according to officials, is due to advanced age. It became known to-day that a general reorganization of the Maxwell-Chalmers personnel is being carried out with the idea the company affairs would be enhanced by the induction of new officials for several positions.

The reorganization plan started with the resignation of Roy M. Hood, long time purchasing agent, who was succeeded by A. C. Downey. The resignation of Ordon Muir, advertising manager, who was succeeded by W. J. Mattimore, and the acquisition of A. E. Barker as sales manager, were in accordance with the determination of officials to rejuvenate the organization. An official of the company said many department heads had formed friendships and alliances which precluded giving their best efforts to the organization.

President Ledyard Mitchell said to-day of the company, at the time of the shut-down last July, had 16,000 Maxwell cars on hand and 5500 Chalmers, of which 10,000 Maxwell and 4000 Chalmers had been sold. President Mitchell said the company is turning out 50 Maxwells and 20 Chalmers daily.

OLD TIMERS ATTEND PHILADELPHIA REUNION

PHILADELPHIA, March 17—The "Old Timers" reunion, held at the annual dinner of the Philadelphia Automobile Trade Association, at the Ritz-Carlton Hotel, was an absolutely "speechless" function. About two hundred members and guests participated. There was not even a toastmaster. W. H. Metcalf, chairman of the banquet committee, confined his function to directing the elaborate vaudeville entertainment.

Visiting guests included Lee J. Eastman, of the Packard Motor Car Company of New York; Emlen S. Hare, of Hare's Motors, New York; T. S. Johnston, of Scripps-Booth, New York; William P. Berrien, New York; E. C. McCurdy, Pittsburgh; Fred Devlin, Lancaster, Pa.; E. N. Stimson, Lancaster, Pa.; Fred C. Van Derhoof, New Castle, Pa.; Philip S. Tyre, architect, who planned the last few automobile shows here; W. L. Olsen, W. S. Kriebel, Jr.; G. B. Dallaid, D. P. Lash, H. H. Rudolph, Harry Jones and S. F. Levy.

COMING EVENTS

SHOWS

Columbia, S. C.....Mar. 28-Apr. 2..Annual Automobile Show, Columbia Automotive Trade Ass'n, State Fair Bldg., J. M. Green, Mgr.

Greenfield, Mass.....Mar. 28-Apr. 2..Annual Automobile Show, Greenfield Automobile dealers' Ass'n, G. T. D. Factory, G. E. Graham, Mgr.

New Britain, Conn.....Mar. 30-Apr. 2..Annual Automobile Show, Armory.

Lewistown, Pa.....Mar. 31-Apr. 2..Annual Automobile Show, Market House Hall, Lewistown Automobile Trade Ass'n.

Bridgeton, N. J.....April 2-9.....Annual Automobile Show, Bridgeton Automotive Ass'n.

DenverApril 3-9.....Annual Automobile Show, Auditorium.

Gloversville, N. Y.....April 4-9.....Annual Automobile Show, Armory, J. J. Callahan, Mgr.

SeattleApril 4-9.....Annual Automobile Show, Motor Car Dealers' Ass'n, Arena-Hippodrome, W. J. Coyle, Mgr.

Norfolk, Neb.....April 7-9.....Annual Automobile Show, Automotive Trade Ass'n of the Norfolk Commercial Club.

Charlotte, N. C.....April 11-16.....Annual Automobile Show, Charlotte Automotive Trade Ass'n, W. M. Jones, Sec'y.

Oklahoma City, Okla....April 11-16.....Annual Automobile Show, Oklahoma Motor Car Dealers' Ass'n.

Dallas, Texas.....April 11-16.....Annual Automobile Show, Dallas Automobile Trade Ass'n, Henry B. Marks, Mgr.

Red Bank, N. J.....April 16-23.....Annual Automobile Show, Monmouth County Automobile Dealers' Ass'n, Armory.

Goldsboro, N. C.....April 20-23.....Automobile and Industrial Exhibit, Goldsboro Automotive Trade Ass'n, W. C. Denmark, Mgr.

Mexico City, Mexico....Apr. 20-May 5..Mexico City Show, National Theatre Building.

RACES

IndianapolisMay 30.....Indianapolis Sweepstakes.

Uniontown, Pa.....June 18.....Speedway Events.

TacomaJuly 4.....Speedway Events.

Le Mans, France.....July 24.....Grand Prix.

Uniontown, Pa.....Labor Day.....Autumn Classic.

Los Angeles.....Nov. 24.....Speedway Events.

AUTOMOBILE CLUB SHOW SET FOR APRIL 4 TO 9

NEW YORK, March 21—The most interesting development of the past week in the motor world is the announcement that came from the Automobile Club of America of the special exhibition of motor cars to be held at the clubhouse during the week of April 4 to 9.

This is to be a private showing of high grade cars in various classes and is planned to afford the clubmen of New York and the metropolitan district an opportunity to make a leisurely examination and comparison of the finest chassis and coachwork in the country.

FORD IS OPERATING WITHOUT BANK HELP

(Continued from page 34)

is operating on his own money and apparently succeeding. There is always ahead of him the beacon light furnished by the bank syndicate's representative, that any time he needs money he can get it by a brief telegram to New York intimating that the conditions will be satisfactory. It can be stated positively

also that these conditions do not impose in any way control of the Ford factory or even a bank representative in any authoritative position except that the treasurer selected by the Ford Motor Co. may be a man acceptable to them.

Successful operation of the big organization without help would be the best tonic that could be given the industry, it was urged. The New York bankers naturally are heavily involved in automobile financing, and their representative stated frankly that they would be gratified if Ford could operate successfully on his own hook for the stimulus afforded the industry.

Holt to Talk on Flat Rate

NEW YORK, March 18—Henry M. Holt will give a twenty minute talk on flat rates in the service business and how to install it in shops of any size, at the April meeting of the Automotive Service Association of New York. W. G. Gow will tell of some of the shortcuts used by him in servicing Studebaker cars. Frank A. Brown will talk on servicing Selden trucks. The meeting will be held at the Automobile Dealers Association.

JOBBER LOOK FOR RECORD SALES YEAR

(Continued from page 35)

would only use a little salesmanship in this regard they would add materially to their incomes. The ordinary dealer sells accessories and equipment only to customers who come into his place and ask for some particular thing. Hundreds of additional sales would be made if every dealer would push these lines, display them to advantage, and tell his customers about them instead of waiting until they ask him."

Stranahan urged the jobbers through their salesmen to carry on an educational and promotion campaign among the dealers, to get them to a point where they will push these lines because they can make a great deal of additional profit if they would follow that method. The Champion Spark Plug Co., for example, spends \$400,000 per year in this sort of promotion work alone.

The two-day session of the Southern Automotive Equipment Jobbers' Association was held in conjunction with the Great Southern Automobile Show in Atlanta, March 5 to 12.

The New Car and Truck Description Index

Where to find descriptions printed in Motor World during the past year

Cars

Bour-Davis (7 pass. model)....	May 5, 1920-42
Lorraine.....	June 23, 1920-34
Tulsa.....	July 7, 1920-32
Simplicity Six.....	Aug. 4, 1920-40
Buick, 1921.....	Aug. 18, 1920-14
Liberty (Coupe).....	Aug. 18, 1920-31
Mercer (limousine).....	Aug. 18, 1920-37
Forster.....	Aug. 25, 1920-33
Paige Big Six (Six-66).....	Sept. 1, 1920-34
Lincoln.....	Sept. 8, 1920-34
Stanwood Six.....	Sept. 15, 1920-31
Packard Single Six.....	Sept. 29, 1920-32
Sherridan Eight.....	Oct. 6, 1920-32
Globe Four.....	Oct. 20, 1920-32
Mercedes (Post War Model).....	Oct. 20, 1920-33
Lafayette (Coupe).....	Oct. 27, 1920-40
McFarlan Type 147.....	Oct. 27, 1920-41
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Essex (Cabriolet).....	Nov. 10, 1920-35
Handley-Knight Four.....	Nov. 17, 1920-32
Duesenberg 8.....	Nov. 17, 1920-33
Collinet (Salon).....	Nov. 24, 1920-18
Pierce-Arrow.....	Nov. 24, 1920-32
Stevens-Duryea.....	Dec. 1, 1920-30
Kelsey.....	Dec. 1, 1920-31
Oldsmobile (Model 43-A).....	Dec. 15, 1920-33

National (Sextet Phaeton).....	Dec. 15, 1920-36
Lexington Series T.....	Jan. 5, 1921-32
Fergus, 1921.....	Jan. 12, 1921-23
Milburn Electric (38D & 38T).....	Jan. 12, 1921-21
Haynes Model 50.....	Jan. 12, 1921-20
Jackson Four.....	Jan. 12, 1921-18
Oldsmobile Light Eight.....	Jan. 12, 1921-18
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Kissel Coach Sedan.....	Jan. 19, 1921-21
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Winther.....	Feb. 2, 1921-11
Premcar Special.....	Feb. 9, 1921-23
Oldsmobile Light 8.....	Mar. 9, 1921-33
Wills-Sainte Claire.....	Mar. 16, 1921-30
Rolls-Royce.....	Mar. 23, 1921-32

Trucks

Patriot (Revere 1½ ton).....	Apr. 28, 1920-23
Kearns (¾ ton model).....	May 5, 1920-36
Jumbo Highway Express (2-ton).....	June 23, 1920-33

Acason (5 ton).....	June 23, 1920-34
Schnact (chaises).....	June 30, 1920-32
Luedinghaus (4 ton).....	July 21, 1920-32
Avallac (1½ ton).....	Aug. 4, 1920-32
Grant (1½ ton).....	Aug. 11, 1920-32
Eagle (2 ton).....	Aug. 11, 1920-32
Duplex (2½ ton).....	Aug. 18, 1920-31
Stoughton (1½, 2 & 3 ton).....	Aug. 25, 1920-32
Lorain (2 ton).....	Sept. 1, 1920-30
Pierce-Arrow (2 ton x 5, 3½ ton, W-2; 5 ton, r-10).....	Sept. 8, 1920-30
Lone Star (1½ ton).....	Oct. 27, 1920-30
Transport (3½ ton).....	Nov. 3, 1920-31
Gramm-Bernstein (1 ton speed model).....	Nov. 10, 1920-35
Avery (1 ton).....	Nov. 10, 1920-36
Moline farm truck (1½ ton).....	Nov. 10, 1920-36
Rumely (1½ ton).....	Nov. 10, 1920-36
Armleder (1 ton).....	Nov. 10, 1920-37
Commerce (Mercantile Exp.).....	Nov. 10, 1920-37
Bollstrom (4 ton).....	Nov. 24, 1920-34
Mack (double red, axles).....	Jan. 5, 1921-32
Aries (5 ton).....	Jan. 12, 1921-49
Rainier (3½ and 5 ton).....	Jan. 12, 1921-31
Ward La France (5 ton).....	Jan. 12, 1921-30
Bessemer (4 ton).....	Jan. 12, 1921-30
Clinton (1½, 2½, 3½ & 5 ton).....	Jan. 12, 1921-30
Bridgeport (1½, 2½ & 6 ton).....	Jan. 12, 1921-30
Brookway (Highway Express).....	Jan. 26, 1921-25
Akron Multitruck (1 ton).....	Feb. 9, 1921-32
Service Speed Wagon (1 ton).....	Feb. 16, 1921-32
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Stoughton (1 ton).....	Feb. 23, 1921-33
G. M. C. (K-15, ¾ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton).....	Mar. 2, 1921-23
Kissel Speed Truck (1 ton).....	Mar. 23, 1921-33

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity
Allis-Chalm. B	6-12	\$ 925	2	LeR.	4-3½x4½	Gas.	1-2	Franklin Bull G	18-30	\$3650	2	Clim.	4-5 x6½	GorK	3-4	Pioneer.....C	30-60		4	Own	4-7 x8	Gas.	10
Allis-Chalm. G.P.	6-12	850	2	LeR.	4-3½x4½	Gas.	1-2	Frick.....A	12-20		4	Erd.	4-4 x6	G.K.	2-3	Pleasantman.....A	15-30	\$1995	4	Own	4-4½x6	G.K.	3-4
Allis-Chalm. 12-20	12-20	1495	4	Own	4-4½x6½	G.K.	3-4	Frick.....C	15-28		4	Beav.	4-4½x6	G.K.	3-4	Port Haven A.	12-25	1700	4	Wauk	4-4½x6	G.K.	3
Allis-Chalm. 18-30	18-30	2150	4	Own	4-4½x6½	GorK	3-4	G-O.....G	14-28	1485	4	Wauk	4-4½x5½	GorK	3	Post.....D	12-20		4	Wauk	4-4½x5½	GorK	2
Allwork.....2-G	14-28		4	Own	4-4½x6	GorK	3	Grain Belt.....	18-36	2500	4	Wauk	4-4½x6½	GorK	4	Prairie Dog L.	9-18		3	Wauk	4-3½x5½	Gas.	2
Allwork.....C	14-28		4	Own	4-5 x6	GorK	3	Gray.....1920	18-36		3	Wauk	4-4½x6½	Gas.	4	Prairie Dog D.	15-30		4	Wauk	4-4½x6½	Gas.	3
Andrews-Kin D.	18-36	2500	4	Clim.	4-5 x6½	GorK	4	Ground Hog.....	19-31	2800	4	Erd.	4-4 x6	GorK	3	Ranger Cal. A.	8-16	1250	4	LeR.	4-3½x4½	Gas.	1
Ans.....A	3-5		4	Own	1-4½x5	Gas.	2-3	Gr. Western St.	20-30	1950	4	Beav.	4½x6	K.	4	Reed.....	15-30	2185	4	Dom	4-4½x6	G.K.	3-4
Appleton.....	12-20	1500	4	Buda	4-4½x5½	G.K.	2-3	Hart-Parr.....30	15-30	1595	4	Own	2-6½x7	K.D	3	Reliable.....	10-20	985	4	Own	2-6 x7	Ker.	2
Aultman-T.....	15-30		4	Clim.	4-5 x6½	G.K.	4	Heider.....D	9-16		4	Wauk	4-4½x5½	G.K.	2	Res.....	12-25	1600	4	Wauk	4-4½x5½	GorK	3
Aultman-T.....	22-45		4	Own	4-5½x8	G.K.	6	Heider.....C	12-20		4	Wauk	4-4½x6½	G.K.	3	Samson.....M	10-20	1060	4	Nov.	4-4 x5½	G.K.	2
Aultman-T.....	30-60		4	Own	4-7 x9	G.K.D	8	Heider.....Cult	6-10		4	LeR.	4-3½x4½	Gas.	1	Sandusky.....J	15-30		4	Own	4-4½x5½	G.K.D	2
Autocut B-3.....	12-24	1785	4	Herc's	4-4 x5½	Gas.	2-3	Hicks.....	15-30	1750	4	4	4-4½x6	GorK	4	Sandusky.....E	15-35		4	Own	4-5 x6½	G.K.D	4
Avery S.R. Cult.	5-10		4	Own	4-3 x4	G.K.	2	Huber.....	12-25		4	Wauk	4-4½x5½	GorK	3	Shawnee.....	6-12		2	LeR.	4-3½x4½	Gas.	1
Avery Cult-C	5-10		3	Own	4-3 x4	G.K.	2	Illinois.....C	18-36	2375	4	Clim.	4-5 x6½	G.K.	4	Shawnee.....	9-18		2	Gray	4-3½x5		
Avery.....B	5-10		4	Own	6-3 x4	G.K.	2	Imperial.....E	40-70	5000	4	Own	4-7½x9	G.K.D	10	Shelby.....C	10-20		4	Erd.	4-4 x6	GorK	2-3
Avery.....C	8-16		4	Own	2-5½x6	G.K.D	2-3	Indiana.....F	5-10		4	LeR.	4-3½x4½	Gas.	1	Shelby.....D	15-30		4	Beav.	4-4½x6	G.K.	3
Avery.....	12-25		4	Own	2-6½x7	G.K.D	3-4	International.....	8-16		4	Own	4-4½x5	G.K.D	2	Short Turn.....	20-40	1500	3	4	4-4½x6	G.K.	3
Avery.....	14-28		4	Own	4-7½x7	G.K.D	3-4	International.....	15-30		4	Own	4-4½x5	G.K.D	2	Square T.....A	18-35	2075	3	Clim.	4-5 x6½	G.K.	3
Avery.....	18-36		4	Own	4-5½x6	G.K.D	4-5	J-T.....N	16-30		2	4	4-5½x8	G.K.D	4	Steady Pull.....	12-23	1485	4	4	4-4 x5	Gas.	3
Avery.....	25-50		4	Own	4-6½x7	G.H.D	5-6									Stinson.....4E	18-36		4	Beav.	4-4½x6	G.K.	4
Avery.....	45-65		4	Own	4-7½x8	G.K.D	8-10									Stone.....	20-40		4	Beav.	4-4½x6	G.K.	4
Bates All St.....	15-25		4	Own	4-4½x6	Ker.	3	Kardel Util.....	12-25	1650	4	Midw.	4-4½x5½	GorK	3	Tiga.....3	15-27	2625	4	Wisc.	4-4½x6	Gas.	3-4
Bates.....S.M.	15-22		4	Own	4-4½x6	G.K.D	3	Kech-Gon.....	15-30	1650	4	Own	2-7½x8	G.K.	3	Titan.....	10-20		4	Own	2-6½x8	G.K.D	3
Bean.....	8-16		1	Own	1-3½x4	G.K.	2-3	Klumb.....F	10-12		4	Clim.	4-5 x6½	G.K.	3	Tillerm.....A	2-6	385		Vur.	1-4 x4	G.K.	3
Beaman.....G	2-4	340	4	Own	1-3½x4½	Gas.	½	LaCrosse.....M	7-12	900	4	Own	2-4 x6	G.K.	1	Topp.....B	30-45	4000	4	Wauk	4-4½x6½	Gas.	3-4
Best.....30	20-30	3250	2	Own	4-4½x6½	G.K.D	4	LaCrosse.....H	12-24	1250	4	Own	2-6 x7	GorK	3	Toro.....	6-12	950	4	LeR.	4-3½x4½	Gas.	2
Best.....60	35-60	5750	2	Own	4-6½x8	G.K.D	8-10	Laussen.....21	15-30		4	Beav.	4-4½x6	GorK	3-4	Traylor.....TB	6-12	815	4	LeR.	4-3½x4½	Gas.	1
Bering.....1921	14-50		3	Wauk	4-4½x5½	GorK	2	Leader.....B	12-20		4	Own	2-6 x6½	G.K.D	2-3	Triumph.....H	18-36	2450	2	Erd.	4-4½x6	Ker.	4
Bull.....	12-24	1200	3	Toro.	2-5½x7	G.K.	3	Leader.....N	16-32		4	Clim.	4-5 x6½	G.K.	3-4	Turner.....	14-25	1605	4	Buda	4-4½x5½	G.K.	3
Burn-Oil.....	15-30	1650	4	Own	2-6½x7	Ker.	3	Leader.....C	18-36		4	Clim.	4-5 x7½	G.K.D	4-6	Twin City.....	12-20		4	Own	4-4½x6	G.K.	3
								Leonard.....E	20-30	2530	4	Buda	4-4½x6	G.K.	3	Twin City.....	20-35		4	Own	4-5½x6½	G.K.	5
Capital.....	15-30	1500	2	Own	4-4½x6	Gas.	33	Liberty.....A	18-32	2475	4	Clim.	4-5 x6½	G.K.	4	Twin City.....	40-65		4	Own	4-7½x9	G.K.	8
Case.....	10-18	1250	4	Own	4-3½x5	GorK	3	Little Bear.....	4	850	4	Ford	4-3½x4	Gas.	4	Uncle Sam C20	12-20	1385	4	Wid	4-4 x5½	GorK	2-3
Case.....	15-27	1865	4	Own	4-4½x6	GorK	3	Little Giant.....B	16-22	2200	4	4	4-4½x5	K.	4	Uncle Sam B19	20-30	2300	4	Beav.	4-4½x6	GorK	3-4
Case.....	22-40	3350	4	Own	4-5½x6½	GorK	4-5	Little Giant.....A	26-35	3200	4	4	4-5½x6	K.	6	Universal.....	1-4	475	2	Own	1-3½x4	G	1
Caterpillar T11	25		2	Own	4-4½x6	Gas.	4	Lombard.....	85-150		2	4	6-5½x6½	Gas.	16	Utiliter.....501	2½-4	380	4	Own	1-3½x4½	G	5-6
Caterpillar T16	40		2	Own	4-6½x7	Gas.	6	Maculivator.....	1½	225	2	Own	1-2½x3½	Gas.	3								
Chase.....	12-25		3	Buda	4-4½x5½	GorK	2-3	Magnet.....B	14-28	1875	4	Wauk	4-4½x6½	K&G	3	Vellie.....	12-24	1750	4	Own	4-4½x5½	G.K.D	3
Cletrac.....W	12-20	1495	2	Own	4-4 x5½	G.K.D	2-3	Market.....	2-4½		4	Vur.	1-4 x4	Gas.	3	Victory.....	9-18	1345	4	Gray.	4-3½x5	Gas.	2
								Master Jr.....	4-8		4	LeR.	-2½x4	Gas.	1	Victory.....	15-30	1750	4	Wauk	4-4½x5½	Gas.	3
Dakota.....4	15-27	1750	3	Dom.	4-4½x6	Gas.	3-4	Merry Gar.....	2	230	2	Evin	1-2½x2½	Gas.	1	Vim.....	15-30	1695	4	Wauk	4-4½x5½	G.K.	3
Dart.....B.J.	15-30		4	Buda	4-4½x6	Gas.	4	Mine.....All-P	12-25	1325	4	Own	4-4½x7	GorK	3								
Dupont.....A	20-30	2500	4	Cont.	4-4½x6	Gas.	3	Mohawk 1921.....	8-16	785	4	Light	4-3½x4½	GorG.	1-2	Wallis.....K	15-25		4	Own	4-4½x5½	G.K.	8
Duff.....D	20	2480	4	Own	1-4½x5	Gas.	5-6	Moine Univ D.	9-18	1325	2	Own	4-3½x5	Gas.	2	Waterloo.....N	12-25		4	Own	2-6½x7	G.K.	8
Do-It-All.....	4-6	595	1	Own	1-4½x5	Gas.	5-6	Monarch Orch.....	9-18	1375	2	Own	4-3½x5	Gas.	2-3	Webfoot.....	28-53	5250	2	Erd.	4-5½x7	G.D	6
Eagle.....F	12-22	1390	4	Own	2-7 x8	GorK	3-4	Monarch.....	30-18	3250	2	Beav.	4-4½x6	Ker.	4	Wellington.....B	12-22		4	Chief	4-4½x6	Ker.	2-3
Eagle.....F	12-30	1850	4	Own	2-8 x8	GorK	4-5	Metex.....	15-30	2250	4	Buda	4-4½x6	GorK	3	Wellington.....F	16-30		4	Chief	4-4½x6	Ker.	3-4
E-B.....	12-20		4	Own	4-4½x5	GorK	4									Wetmore.....	12-25	1650	4	Wauk	4-4 x5½	G.K.	2-3
E-B.....Q	12-20		4	Own	4-4½x5	GorK	4	New Britain. 1	3-6	425	4	Own	2-3½x4	Gas.	¾	Wharton.....E	12-20	1800	3	Gray	4-3½x5	Gas.	2
E-B.....D	16-32		4	Own	4-5½x7	GorK	4	New Britain. 2	3-6	425	4	Own	2-2½x4	Gas.	¾	Whitney.....	9-18	1175	4	Own	2-5½x6½	Gas.	2
E-B-Reeves	40-65		4	Own	4-7½x9	GorK	8-10	Nilson Spec.....	10-20		4	Wauk	4-3½x5½	Gas.	2	Wichita.....T	15-30	2500	4	Beav.	4-4½x6	G.K.D	3-4
Evans.....	18-30	2000	4	Buda	4-4½x6	G.K.	3	Nilson Senior.....	20-40		5	Wauk	4-5 x6½	G.K.	4	Wisconsin.....E	16-30	2250	4	Clim.	4-5 x6½	G.K.D	4
Fageol.....D	9-12	1525	4	Lyc.	4-3½x5	Gas.	2	Oil Pull.....	12-20		4	Own	2-6 x8	K.D	3	Zelle.....	12-25		4	4	4-4½x5½	GorK	3
Farm-Horse.....	18-30	1885	4	Clim.	4-5 x6½	G.K.	3-4	Oil Pull.....	16-30		4	Own	2-7 x8½	K.D	4								
Farguhar.....	15-25		4	Buda	4-4½x6	G.K.D	3-4	Oil Pull.....	20-40		4	Own	2-8 x10	K.D	5-6								
Farguhar.....	18-35		4	Own	4-6 x8	G.K.D	4-5	Oil Pull.....	30-60		4	Own	2-10x12	K.D	8-10								
Farguhar.....	25-50		4	Own	4-7 x8	G.K.D	6-7	Oldsmar.....	3-5	395	4	Own	1-5½x5½	G.K.D	¾								
Fitch.....4	20-35		4	Clim.	4-5 x6½	GorK	3-4	Oliver.....A	15-30		2	Beav.	4-4½x6	GorK	3-4								
Flour City.....	20-35		4	Own	4-5½x6	Ker.	4-6																
Flour City.....	30-50		4	Own	4-6½x7	Ker.	6-8	Parrett.....K	15-30		4	Pitt	4-4½x6	G.K	3								
Flour City.....	40-70		4	Own	4-7½x9	Ker.	6-1	Peoria.....L	12-25	1785	4	Clim.	4-5 x6½	G.K	3								
Fordson.....	-18	790	4	Own	4-3½x4	G.K	2	Pioneer.....G	18-36		4	Own	4-5½x6	G.K.D	4								

ABBREVIATIONS: G—Gasoline. K—Kerosene. D—Distillate. Flow capacity figures in relation to operating conditions. Figures are based on 14-in. plows. LeR—LeRoi. Clim—Climax. Beav—Beaver. Dom—Domian. Cont—Continental. Wauk—Waukesha. Wisc—Wisconsin. T.C.—Twin City. Vur—Vurac. Evin—Evinrude. Midw—Midwest. Com—Commercial Tractor. *—Crawler type. All others are wheel type.

Specifications of Current Models of Passenger Cars

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....G	Guy	6-31x5	123	32x4	\$2260	\$2260		\$3680	\$3680	Maibohm.....B	Own.	6-31x4 1/2	116	32x4	\$1575	\$1575		\$2395	\$2395
Allen.....Series 43	Own.	4-31x5	110	32x4	\$1395	1395			2395	Marmont.....34	Own.	6-31x5 1/2	136	32x4 1/2	5300	\$5000	\$5000	6150	6600
Ambassador.....R	Own.	12-27x5	136	32x4 1/2						Maxwell.....25	Own.	4-31x4 1/2	109	30x3 1/2	995	995		1595	1695
American Six.....C	H-S.	6-31x5	127	32x4	2395	2395	\$2475	3295	3495	McFarlan.....1921	Own.	6-41x6	140	33x5	6300	\$6300	6300	7500	7500
Anderson.....Series 40	Cont.	6-31x4 1/2	120	3x4	2195	1795	1845	2795	2795	Mercer.....Series 5	Own.	4-31x6 1/2	132	32x4 1/2	3950	\$3950	\$3950	5150	5650
Apperson.....8-21-S	Own.	8-31x5	130	34x4 1/2		\$3500	3500	4500	4500	Merit.....Walk	Own.	6-31x4 1/2	119	32x4	2245	\$2245			
Apperson.....Anniversary	Own.	8-31x5	130	34x4 1/2		\$4250	4250			Meteor.....R&RR	Dues.	4-41x6	129	32x4 1/2	5500	5500			
Auburn.....6-39	Cont.	6-31x4 1/2	120	33x4	1745	1695	\$1695	2795	2795	Metz.....M6	Rut.	6-31x5	120	32x4	1995	1995		2795	2895
Beggs.....20T	Cont.	6-31x4 1/2	120	33x4	1885	1885		2785	2885	Mitchell.....F-40	Own.	6-31x5	120	33x4	\$1750	1750	\$1950	2800	2900
Bour-Davis.....21S	Cont.	6-31x5 1/2	126	33x4 1/2	\$2585		2585			Mitchell.....F-42	Own.	6-31x5	127	34x4 1/2			1995		
Bradley.....Four	Own.	4-4 x5 1/2	125	32x4 1/2	\$7900	9000			10500	Moon.....6-48	Cont.	6-31x4 1/2	122	32x4	2285	2185	2685	2985	2985
Brewster.....91	Own.	4-4 x5 1/2	109	31x4	1285	1285		1885	1885	Murray-Mac Six	Own.	8-31x5	128	34x4 1/2	4250	4250	4250		
Briscoe.....4-34	Own.	6-31x4 1/2	118	33x4 1/2	1795	1795		2585	2895	Nash.....681-6	Own.	6-31x5	121	33x4	1695	1695	\$1850		
Buick.....21-44-5-6-7	Own.	6-31x4 1/2	124	24x4 1/2			2065	2985	3295	Nash.....682	Own.	6-31x5	127	34x4 1/2			1875	2650	2895
Buick.....21-48-9-50	Own.	6-31x4 1/2	124	24x4 1/2						Nash Four.....41-4	Own.	4-31x5	112	32x3 1/2	1395	1395		1985	2185
Cadillac.....59	Own.	8-31x5 1/2	125	34x4 1/2	3790	\$3790			4950	National Sextet.....BB	Own.	6-31x5 1/2	130	32x4 1/2	3750	\$3750	3750	4900	4950
Case.....V	Cont.	6-31x5 1/2	126	34x4 1/2		\$2650	2650	3400	3750	Nelson.....D	Own.	4-31x4 1/2	104	32x4		1900			
Chalmers.....6-30	Own.	6-31x4 1/2	117	32x4	1795	1795	1945	2595	2745	Noma.....1C	Cont.	6-31x4 1/2	128	32x4 1/2	3000	3200			4450
Chalmers.....6-30	Own.	6-31x4 1/2	122	33x4 1/2			1945			Norwalk.....430-KS	Lyc.	4-31x5	116	32x3 1/2		1285			
Champion.....Tourist	Lyc.	4-31x5	113	32x3 1/2		1250				Oakland.....34-C	Own.	6-21x4 1/2	115	32x4	1395	1395		2065	2065
Champion.....Special	H-S.	4-31x5	118	32x4	\$1595	1595				Ogren.....6-60	Own.	6-31x5 1/2	134	33x5	3500	3900	5000	5400	
Chandler.....	Own.	6-31x5	123	33x4	1930	\$2010	1930	2930	3030	Oldsmobile.....43-A	Own.	4-31x5 1/2	115	32x4	\$1445	1445		2145	2145
Chevrolet.....490	Own.	4-31x4	102	30x3 1/2	795	820		1325	1375	Oldsmobile.....47	Own.	8-31x4 1/2		32x4		1695		2395	2395
Chevrolet.....FB	Own.	4-31x5 1/2	110	33x4	1320	1345		2075	2075	Overland.....4	Own.	4-31x5 1/2	100	30x3 1/2	895	895		1425	1475
Cleveland.....40	Own.	6-3 x4 1/2	112	32x4	1465	1465		2375	2475	Packard.....Single-Six	Own.	6-31x4 1/2	116	33x4 1/2	2975	2975		4150	4250
Climber Six.....S	H-S.	6-31x5	125 1/2	32x4 1/2	2750	2750				Packard.....Twin Six	Own.	12-3 x5	136	35x5	6000	\$6000	6000	8200	8450
Cole.....870	Nort.	8-31x5 1/2	127	33x5	3250	\$3250	3250	4250	4450	Paige.....6-42	Own.	6-31x5	119	32x4	1795	1795		2600	2720
Columbia.....D-C&CS	Cont.	6-31x4 1/2	115	32x4	1945	1795		2895	2895	l aige.....6-66	Cont.	6-31x5	131	33x4 1/2	\$2985		2895	3775	3850
Comet.....C-53	Cont.	6-31x5 1/2	125	33x4 1/2		2350	2450		3650	Pan.....A	Own.	4-31x5	108	33x4		1500			
Commonwealth.....44	Own.	4-31x5	117	32x4		1595			2465	Pan American E&F-6-55	H-S.	6-31x5	121	33x4	2250	2250			
Crawford.....21-60	Cont.	6-31x5 1/2	122 1/2	32x4	3000	3000			4500	Parenti.....1921	Own.	8-21x4 1/2	123	32x4		2000		3000	
Crow-Elkhart.....L63-65	Lyc.	4-31x5	117	32x3 1/2	\$1295	1295			2195	Paterson.....650	Cont.	6-31x4 1/2	120	33x4		1895	1925	2895	2895
Crow-Elkhart.....S63-65	H-S.	6-31x5	117	33x4	\$1545	1545			2395	Peerless.....56-S-7	Own.	8-31x5	125	34x4 1/2		\$2990	2990	3680	3950
Cunningham.....V-4	Own.	8-31x5	132	35x5	6200	6200	6700	7600	7600	Piedmont.....4-30	Lyc.	4-31x5	116	32x3 1/2		1485			
Daniels.....D-19	Own.	8-31x5 1/2	132	34x4 1/2	\$5350	\$5350	5350	6250	6950	Piedmont.....6-40	Cont.	6-31x4 1/2	122	32x4		1945			
Davis.....51-57	Cont.	6-31x4 1/2	120	33x4	\$1995	1895	\$2150	2795	2795	Pierce-Arrow.....	Own.	6-4 x5 1/2	138	35x5	8000	\$7500	7500		9000
Dispatch.....G	Own.	4-31x5	120	34x4	1290	1350	1525	1575		Pilot.....6-50	H-S.	6-31x5	126	32x4 1/2	2285	2285		3600	3600
Dixie Flyer.....H-S-70	H-S.	4-31x5	112	32x4	1595	1595		2570	2570	Porter.....40	Own.	4-4 6x6 1/2	142	35x5	6750	Chassi s Price			
Lodge Brothers.....	Own.	4-31x4 1/2	114	32x3 1/2	1235	1285		1900	2150	Premier.....6-D	Own.	6-31x5 1/2	126 1/2	33x5	4600	\$4600	4600	5600	6100
Dorris.....6-80	Own.	6-4 x5	132	33x5		\$4785	4785	5800	6690	Premocar.....6-40-A	Falls.	6-31x4 1/2	117	32x3 1/2		1295			
Dort.....17-A	D-Ly	4-31x5	108	31x4	1215	1215		1865	1995	Premocar.....4-80	Dues.	4-4 x6	117	32x4 1/2		3865			
Dupont.....A	Own.	4-31x5 1/2	124	32x4 1/2	3400	\$3400			4900	Raleigh.....A-6-60	H-S.	6-31x5	122	32x4 1/2	\$2750	2750		3600	3700
Elcar.....7-R	Cont.	6-31x4 1/2	117	33x4	\$1795	1795	\$1795	2500	2600	Ranger.....A-20	Own.	4-31x5	116	32x4			2150	2850	2950
Elgin.....K-1	Falls.	6-31x4 1/2	118	33x4	\$1895	1775		2685	2685	R & V Knight.....R	Own.	4-31x5	116	32x4				2850	2950
Essex.....A	Own.	4-31x5	108 1/2	32x4	1595	1595		2100	2450	R & V Knight.....J	Own.	6-31x4 1/2	127	32x4 1/2	3350		3350	4000	4200
Ferris.....	Cont.	6-31x5 1/2	130	32x4 1/2	3350		\$3350		4875	Reo.....T-6	Own.	6-31x5	120	33x4	1850	1850		2700	2750
Ford.....T	Own.	4-31x4	100	30x3 1/2	395	440		745	795	Revere.....C	Dues.	4-31x6	131	32x4 1/2	4850	4650	\$4650		6500
Franklin.....9-B	Own.	6-31x4	115	32x4	2700	2800	\$2750	2950	3850	Roamer.....6-54-E	Cont.	6-31x5 1/2	130	32x4 1/2				4500	4800
Friend.....Four	Own.	4-31x4 1/2	112	32x3 1/2	1585	1585		2485	2585	Rock Falls.....14000	Cont.	6-31x5 1/2	136	35x5					
Globe.....B-1C	Supre	4-31x5	115	32x4						Rolls-Royce.....	Own.	6-41x4 1/2	143 1/2	33x5	11,500	Chassi s Price			
Grant.....HX	Own.	6-31x4 1/2	116	32x4	1550	1550		2450	2450	Saxon.....125	Own.	4-31x5	112	32x4		1675		2475	2475
Gardner.....G	Lyc.	4-31x5	112	32x3 1/2	\$1195	1195		2145	2145	Sayers Six.....DP	Cont.	6-31x4 1/2	118	33x4	2495	2195		3295	
Halladay.....21	Rut.	6-31x5	116	33x4		2285				Scripps-Booth.....B-39-42	Nort.	6-21x4 1/2	115	32x4	\$1545	1515		2215	2295
Handley-Knight.....	Kn ht.	4-41x4 1/2	125	32x4 1/2			2985		4185	Seneca.....L	LeL.	4-31x4 1/2	108	30x3 1/2	1185	1185	1185		
Hanson Six.....60	Cont.	6-31x4 1/2	121	32x4	2365	2365	\$2465		3565	Severin.....Six	Cont.	6-31x5 1/2	122	32x4		2550			
Hatfield.....A-42	H-S.	4-31x5	115	32x4	1695	1695		2595		Sheridan.....4	Nort.	4-31x5 1/2	116	33x4	1685	1685			
Haynes.....47	Own.	6-31x5	132	34x4 1/2	3500	\$2935	2935	4250		Sheridan.....8	Nort.	8-31x4 1/2	132	33x5					
Haynes.....48	Own.	12-29x5	132	34x4 1/2	4200	\$3635	3635	4950		Skelton.....35	Lyc.	4-31x5	112	32x3 1/2	1295	1295			1950
Huffman.....R	Cont.	6-31x4 1/2	120	32x4	1995	1995		2975		Standard.....J	Own.	8-31x5	127	34x3 1/2	3400	\$3400	3400	4500	4900
H.C.S.....Series 3	Weid.	4-31x5 1/2	120	32x4 1/2	2925	\$2975		3650		Stanley Steamer.....	Own.	2-4 x5	130	34x4 1/2		3950	3950	5650	5775
Holmes.....Series 4	Own.	6-31x4 1/2	126	34x4 1/2	\$3350		3350	4250	4550	Stanwood Six.....	Cont.	6-31x4 1/2	118	33x4	\$2050	2050		2900	
Hudson Super 6.....O	Own.	6-31x5	126	34x4 1/2	\$2400	3625	2400	3275	3400	Stearns.....SKL4	Own.	4-31x5 1/2	125	34x4 1/2	2550	2450	2675	3400	3700
Hupmobile.....Series R	Own.	4-31x5 1/2	112	32x4	1685	1685		2725	2800	Stephens.....90	Own.	6-31x4 1/2	122	33x4 1/2	2400	\$2400	2400	3400	3400
Jackson.....638	Cont.	6-31x4 1/2	121	32x4 1/2	\$2685	1950		3760	3760	Stevens Duryea.....E	Own.	6-41x5 1/2	138	35x5	\$8500	\$8000	8000	9500	9500
Jordan.....M	Cont.	6-31x4 1/2	120	32x4	2630	2630	2875	3700	3700	Studebaker.....EJ-40	Own.	6-31x4 1/2	112	32x4	\$1650	1485		2150	
Kenworthy.....8-9C	Own.	8-3 x5 1/2	130	32x4 1/2	5000	5000	5250			Studebaker.....EH-50	Own.	6-31x5	119	32x4	1750	1750	\$1750	2650	2750
King.....H	Own.	8-3 x5	120	32x4 1/2	2740	\$2725	\$2725	4275	4085	Stutz.....EG-60	Own.	6-31x5	126	33x4 1/2		2150			
Kissel.....45	Own.	6-31x4 1/2	124	32x4 1/2	3475	\$2975	2975	4275		Templar.....A-445	Own.	4-31x5 1/2	118	32x4	2885	2885	\$2885		

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Sinks	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Sinks	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Sinks	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acasas, R	1	\$2280					Conestoga, 30	2		3 1/2 x 5	36x4	36x4d	W	Gramm-Born, 35	3 1/2	\$4375	4 1/2 x 5 1/2	36x5	40x5d	W
Acasas, RB	1 1/2	2485					Cook, 41	2	2000	4 x 5 1/2	36x4	36x7	W	Gramm-Born, 50	5	5275	4 1/2 x 5 1/2	36x6	40x6d	W
Acasas, H	2 1/2	3295	4 1/2 x 5 1/2	36x4*	36x4d	W	Corbitt, E	1	2400	3 1/2 x 5	34x3 1/2	34x4	W	Hahn, J4	1		3 1/2 x 5	34x5*	34x5*	W
Acasas, L	2 1/2	4295	4 1/2 x 5 1/2	36x5*	36x5d	W	Corbitt, D	1 1/2	2800	3 1/2 x 5	36x3 1/2	36x5	W	Hahn, CD	1 1/2		4 1/2 x 5 1/2	36x3 1/2	36x6*	W
Acasas, M	5	5250					Corbitt, C	2	3500	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Hahn, EE	2 1/2		4 1/2 x 5 1/2	36x4*	36x8*	W
Ace, C	1 1/2	2750	3 1/2 x 5	34x3 1/2	34x5*	W	Corbitt, B	2 1/2	3650	4 1/2 x 5 1/2	36x4	36x7	W	Hahn, F	3 1/2		4 1/2 x 5 1/2	36x5*	36x10	W
Ace, A	2 1/2	3450	4 1/2 x 5 1/2	36x4*	36x7	W	Corbitt, AA	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x10	W	Hahn, EF	5		4 1/2 x 6	36x6	40x12	W
Ace	5	5350	4 1/2 x 5 1/2	36x6	36x8	W	Dart, S	6	5500	4 1/2 x 5 1/2	36x6	40x6d	W	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x5 1/2	W
Acme, B	1	2175	3 1/2 x 5	34x3 1/2	34x5	W	Dart, M	1 1/2		4 1/2 x 5 1/2	34x3 1/2	34x6	W	Hal Fur, F	2 1/2	3250	4 x 5	35x5 1/2	35x5 1/2	W
Acme, F	1 1/2	2475	3 1/2 x 5	34x3 1/2	34x5	W	Dart, W	2 1/2		4 1/2 x 5 1/2	36x4	36x7	W	Hal Fur, F	3 1/2	4250				
Acme, C	2	3050	4 1/2 x 5 1/2	36x4	36x7	W	Day-Elder, A	1	2100	3 1/2 x 5	34x3 1/2	34x4	W	Hall	1 1/2	3100	3 1/2 x 5	34x5 1/2	35x7 1/2	W
Acme, C	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, B	1 1/2	2300	3 1/2 x 5	34x3 1/2	34x5	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x6	W
Acme, E	5	5150	4 1/2 x 5 1/2	36x6	40x12	W	Day-Elder, C	2 1/2	2750	4 1/2 x 5 1/2	36x4*	36x7	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	36x5d	W
Akr'n Multi-Trk 20	1 1/2	1790	3 1/2 x 5	34x3 1/2	35x5 1/2	W	Day-Elder, D	2 1/2	2950	4 1/2 x 5 1/2	36x4*	36x7	W	Hall	5	5100	4 1/2 x 5 1/2	36x5	40x6d	W
Al-Power, C	3 1/2	5800	4 1/2 x 5	36x7	36x10	W	Day-Elder, E	3 1/2	3750	4 1/2 x 5 1/2	36x5*	36x8	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Al-American, B-1	1	1795	3 1/2 x 5	32x4	32x4	W	Day-Elder, F	5	4800	4 1/2 x 5	36x5	36x8d	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Al-American C-1	1 1/2	2185	3 1/2 x 5	34x4	34x5	W	Dearborn, F	1 1/2	2180	3 1/2 x 5 1/2	34x4*	34x5	W	Harvey, WHA	3 1/2	4300	4 1/2 x 5	36x5	36x5d	W
American, 25	4	4575	4 x 6	36x5*	36x5d	W	Dearborn, 48	2	2890	3 1/2 x 5	35x5 1/2	34x7 1/2	W	Harvey, WKA	5	5200	4 1/2 x 5	36x6	40x6d	W
American, 48	4	1675	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Defiance, D	1 1/2	2550	3 1/2 x 5	35x5 1/2	36x8	W	Hawkeye, K	1 1/2	2365	3 1/2 x 5 1/2	34x3 1/2	34x5*	W
Apeas, G	1 1/2	1915	3 1/2 x 5	34x3 1/2	34x4	W	Defiance, E	2	2750	3 1/2 x 5	35x5 1/2	36x7 1/2	W	Hawkeye, M	2	2915	4 1/2 x 5 1/2	36x4*	36x6*	W
Apeas, E	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x7	W	DeKalb, E2 1/2	2 1/2	2250	4 1/2 x 5 1/2	34x3 1/2	36x5*	W	Hawkeye, N	3 1/2	4345	4 1/2 x 5	36x5*	36x10*	W
Apeas, F	3 1/2	3975	4 1/2 x 5	36x4*	36x10	W	Denby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	36x7 1/2	W	Heedrickson, K	2 1/2	3150	4 1/2 x 5 1/2	36x4*	36x7*	W
Armstrong, HW	2 1/2		4 1/2 x 5	36x4*	36x10	W	Denby, 134	2	2800	3 1/2 x 5	35x5 1/2	36x6	W	Heedrickson, J	3 1/2	3975	4 1/2 x 5 1/2	36x5*	36x5d	W
Armstrong, KW	3 1/2		4 1/2 x 5	36x4*	36x10	W	Denby, 25	3	3800	4 1/2 x 5 1/2	36x4	36x7	W	Highway, A410	4		4 x 6	36x5	36x6d	W
Armstrong, 29	1		3 1/2 x 5	34x3 1/2	34x5*	W	Denby, 27	4	4800	4 1/2 x 5 1/2	36x4	36x7	W	Highway, B510	5		4 x 6	36x5	40x6d	W
Atco, B	1 1/2		3 1/2 x 5	34x3 1/2	36x6*	W	Denby, 210	6	5350	4 1/2 x 5 1/2	36x6	40x6d	W	Higdon, A17	1 1/2	1850				
Atco, B1	1 1/2		3 1/2 x 5	34x3 1/2	36x6*	W	Dependable, A	1	1650	3 1/2 x 5	34x5	36x6	W	Higdon, A18	1	2100	3 1/2 x 5	35x5 1/2	36x5*	W
Atco, A	2 1/2		4 1/2 x 5	36x4*	36x8*	W	Dependable, C	1 1/2	2350	3 1/2 x 5	34x3 1/2	34x5	W	Higdon, B20	1 1/2	2500	4 1/2 x 5 1/2	35x5 1/2	36x6*	W
Atlas, M.D.	1		3 1/2 x 5	32x4 1/2	32x4 1/2	W	Dependable, D	2	2850	4 x 5 1/2	34x5	36x6	W	Higdon, B	1 1/2	2075	3 1/2 x 5	34x3 1/2	34x6	W
Atturbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Atturbury, 7C1	2 1/2	3375	4 1/2 x 5 1/2	36x5	40x5d	W	Dependable, G	3 1/2	3550	4 1/2 x 5 1/2	36x6	38x7	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Atturbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5d	W	Diamond T, O	1 1/2	2500	3 1/2 x 5	36x6	38x7	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Atturbury, 8E	5	5575	4 1/2 x 5	36x5	40x6d	W	Diamond T, FS	1 1/2	2900	3 1/2 x 5	36x6	38x7	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Autocar, 21UG	2	2300	4 1/2 x 5 1/2	34x4*	34x5*	D	Diamond T, T	1 1/2	2650	3 1/2 x 5	36x6	38x7	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Autocar, 21UG	2	2400	4 1/2 x 5 1/2	34x4*	34x5*	D	Diamond T, U	2	3285	4 x 5 1/2	36x4	36x7	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Autocar, 26V	3 1/2	4350	4 1/2 x 5 1/2	34x5	36x10	D	Diamond T, U	3 1/2	4675	4 1/2 x 5 1/2	36x5	38x5d	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Autocar, 26V	3 1/2	4500	4 1/2 x 5 1/2	34x5	36x10	D	Diamond T, EL	5	5400	4 1/2 x 5 1/2	36x6	40x6d	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	36x3 1/2	36x5*	W	Diamond T, S	5	5650	4 1/2 x 5	36x6	40x6d	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Available, H2 1/2	1 1/2	3475	4 x 5 1/2	36x4*	36x8*	W	Diehl, A	1		3 1/2 x 5	34x4 1/2	35x5	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Available, H3 1/2	1 1/2	4475	4 1/2 x 5 1/2	36x5	40x5d	W	Diehl, B	1 1/2		3 1/2 x 5	36x6	36x6	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Available, H5	5	5375	4 x 6	36x6	40x12	W	Dispatch, F	1	1350	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Available, H7	7	6000	5 x 6	36x6	40x14	W	Deane	2 1/2		4 1/2 x 5 1/2	36x5	38x7	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Avery	1		3 x 4	34x5 1/2	34x5 1/2	B	Deane	3 1/2		4 1/2 x 5 1/2	36x5	38x5d	C	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Beck, A. Jr.	1	1800	3 1/2 x 5	34x3 1/2	34x4	W	Deane	6		4 1/2 x 5 1/2	36x6	40x6d	C	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Beck, C	2 1/2	2550	4 1/2 x 5 1/2	36x4	36x6	W	Dodge, C	1 1/2	1085	3 1/2 x 5 1/2	33x4 1/2	33x4 1/2	B	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Beck, O	2 1/2	2750	4 1/2 x 5 1/2	36x4	34x7	W	Dorris, K-4	2	3400	4 1/2 x 5 1/2	36x4	36x7	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Beck, O	1 1/2	2250	3 1/2 x 5	34x3 1/2	34x5 1/2	W	Dorris, K-7	3 1/2	4400	4 1/2 x 5 1/2	36x5	38x10	W	Higdon, C	1 1/2	1875	4 x 5 1/2	34x4*	34x5	W
Belmont, E	2 1/2	1995	3 1/2 x 5	34x3 1/2	34x6*	D	Douglas	1 1/2	2200	3 1/2 x 5 1/2	36x5*	37x8*	W	Higdon, C	1 1/2	1875				

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Base and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
L.M.C., 2-20	2 1/2	2540	4 1/2 x 5 1/2	36x4	36x4d	I	Piedmont, 4-30	1 1/2	1885	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Super Truck, 70	3 1/2	4300	4 1/2 x 6	36x5	40x5d	W
Lion, L	1	2350	3 3/4 x 5 1/2	35x5 1/2	35x5 1/2	W	Pierce-Arrow	2	3750	4 x 5 1/2	36x4	36x4d	W	Super Truck, 100	5	5300	4 1/2 x 6	36x5	40x12	W
Lone Star, 9	1 1/4	1545	3 3/4 x 5 1/2	32x3 1/2	32x4 1/2	W	Pierce-Arrow	3 1/2	4950	4 1/2 x 5 1/2	36x5	36x5d	W	Super Truck, 150	7 1/2	6300	5 x 6	36x6	40x7d	W
Loedinghaus, K	2-2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Pierce-Arrow	5	5700	4 1/2 x 5 1/2	36x5	40x6d	W	Texas, A38	3 1/2	.....	3 1/2 x 5	33x4	33x4	I
Loedinghaus, C	1	2100	3 3/4 x 5 1/2	35x5 1/2	35x5 1/2	W	Pioneer, 39	1	1650	3 1/2 x 4 1/2	32x4 1/2	32x4 1/2	W	Texas, TK39	1 1/2	.....	3 1/2 x 5	36x6	38x7	W
Loedinghaus, W	1 1/4	2700	3 3/4 x 5 1/2	34x3 1/2	34x5	W	Pittsberger, B	2 1/2	3500	4 1/2 x 5 1/2	36x5	36x7	W	Texas, TK	1 1/2	.....	3 1/2 x 5	36x6 1/2	38x7 1/2	W
Maccar, L	1 1/4	2925	4 1/2 x 5 1/2	36x4	36x6	W	Pony	1 1/4	400	2 1/2 x 4	28x3 1/2	28x3 1/2	C	Tiffin, F15	2 1/2	2695	4 1/2 x 5 1/2	36x4	36x5	W
Maccar, H	1 1/4	3450	4 1/2 x 5 1/2	36x4	36x4d	W	Power, F	1 1/4	.....	4 1/2 x 5 1/2	36x6	36x6	W	Tiffin, F25	2 1/2	3580	4 1/2 x 5 1/2	36x4	36x3 1/2	W
Maccar, M-2	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5d	W	Power, C	3 1/2	.....	4 1/2 x 5 1/2	36x5	40x10	W	Tiffin, F35	3 1/2	4760	4 1/2 x 5 1/2	36x5	40x6d	W
Maccar, G	5	5500	4 1/2 x 5 1/2	36x5	40x6d	W	Premcar, B-143	1 1/4	2475	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Tiffin, F50	5	5850	4 1/2 x 5 1/2	36x6	40x6d	W
MacDonald, A	15	5750	4 1/2 x 5 1/2	40x7	40x14	I	Ramier, R-11	1 1/4	2150	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Tiffin, F60	6	6050	4 1/2 x 5 1/2	36x6	40x12	W
Mack, AB D.R.	1 1/4	3450	4 x 5	36x4	36x3 1/2	D	Ramier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5d	W	Titan, HT	3 1/2	4550	4 1/2 x 5 1/2	36x4	40x6d	I
Mack, AB Chain	1 1/2	3000	4 x 5	36x4	36x3 1/2	D	Ramier, R-19	1	2350	3 1/2 x 5	34x3 1/2	34x5	W	Titan, HD	6	5400	4 1/2 x 5 1/2	36x5	40x6d	W
Mack, AB Chain	2	3300	4 x 5	36x4	36x4d	C	Ramier, R-16	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x5	W	Titan, TS	2 1/2	3400	4 1/2 x 5 1/2	36x4	36x7	W
Mack, AB D.R.	2	3750	4 x 5	36x4	36x4d	C	Ramier, R-18	2	2950	3 1/2 x 5	34x4	34x6	W	Tower, J	2 1/2	3000	4 1/2 x 5 1/2	36x5	38x7	W
Mack, AC Chain	3 1/2	4950	5 x 6	36x5	40x5d	C	Ramier, R-20	2 1/2	3650	4 1/2 x 5 1/2	34x4	34x7	W	Tower, H	2 1/2	3475	4 1/2 x 5 1/2	36x4	36x7	W
Mack, AC Chain	5	5500	5 x 6	36x6	40x6d	C	Ramier, R17	5	5250	4 1/2 x 5 1/2	36x6	36x6d	W	Tower, G	3 1/2	4400	4 1/2 x 5 1/2	36x5	36x5d	W
Mack, AC Chain	6 1/2	5750	5 x 6	36x6	40x12	C	Ranger, 2TK-20	2	.....	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Traffic, C	2	1595	3 1/2 x 5	34x3 1/2	34x5	I
Mack, AC Chain	7 1/2	6000	5 x 6	36x7	40x7d	C	Reo, F	3-11	1335	4 1/2 x 4 1/2	34x4 1/2	34x4 1/2	B	Transport, 20	1	1850	3 1/2 x 5 1/2	34x3 1/2	34x4	I
Mack Trac., AB	5	3400	4 x 5	36x4	36x4d	C	Reliance, 10A	2 1/2	2500	4 x 5 1/2	36x3 1/2	36x5	I	Transport, 30	1 1/2	2250	3 1/2 x 5	36x3 1/2	36x5	I
Mack Trac., AB	7	4950	5 x 6	36x5	40x5d	C	Reliance, 20B	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x4d	I	Transport, 50	2 1/2	2785	4 1/2 x 5 1/2	36x4	36x7	I
Mack Trac., AC	10	5500	5 x 6	36x6	40x6d	C	Republic, 10	1	1695	3 1/2 x 5	35x5 1/2	35x5 1/2	I	Transport, 70	3 1/2	4195	4 1/2 x 5 1/2	36x5	36x10	I
Mack Trac., AC	13	5750	5 x 6	36x6	40x12	C	Republic, 10Exp. TT	1	2095	.....	.....	.....	I	Traylor, B	1 1/2	2500	3 1/2 x 5 1/2	34x3 1/2	34x5	W
Mack Trac., AC	15	6000	5 x 6	36x7	40x7d	C	Republic, 11X	1 1/2	2295	3 1/2 x 5	34x3 1/2	34x5	I	Traylor, C	2	3000	4 x 5 1/2	36x4	36x7	W
Mapleleaf, AA	2	4150	4 x 5 1/2	34x4	36x6	W	Republic, 19	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	I	Traylor, D	3	3500	4 1/2 x 5 1/2	36x4	36x8	W
Mapleleaf, BB	3	4865	4 1/2 x 5 1/2	36x4	36x4d	W	Republic, 20	3 1/2	3895	4 1/2 x 5 1/2	36x5	36x10	I	Traylor, E	4	4700	4 1/2 x 5 1/2	36x5	40x10	W
Mapleleaf, CC	4	4770	4 1/2 x 5 1/2	36x5	36x5d	W	Riker, B	3	.....	4 1/2 x 6	36x5	36x5d	W	Traylor, F	5	5100	.....	.....	.....	W
Mapleleaf, DD	5	7025	4 1/2 x 5 1/2	36x6	40x6d	W	Riker, BB	4	.....	4 1/2 x 6	36x5	36x6d	W	Triangle, AA	1	1600	3 1/2 x 5	35x5 1/2	35x5 1/2	I
Master, JW	1 1/4	2600	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Rwa, CW	1 1/4	3000	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Triangle, A	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x6	I
Master, W	2 1/2	3200	4 1/2 x 5 1/2	34x4	36x7	W	Rwa, HW	4	4500	4 1/2 x 6	36x5	36x6d	W	Triangle, C	2	2700	3 1/2 x 5 1/2	36x4	36x6 1/2	I
Master, D	2 1/2	3540	4 1/2 x 5 1/2	34x4	36x7	D	Rwa, C. D. W.	2	3300	4 x 5	34x4	36x3 1/2	D	Triangle, B	2 1/2	2950	4 x 5 1/2	36x4	36x7	I
Master, A	3 1/2	4100	4 1/2 x 6	36x5	40x5d	D	Rwa, G. S. W.	3	4150	4 x 6	34x5	36x5d	W	Triumph, HB	2	2900	3 1/2 x 5 1/2	36x4	36x7	W
Master, E	3 1/2	4640	4 1/2 x 6	36x5	40x5d	D	Rwa, G. P. W.	3	5250	3 1/2 x 5 1/2	38x7 1/2	42x9 1/2	W	Triumph, HC	1 1/2	2550	3 1/2 x 5 1/2	36x3 1/2	36x5	W
Master, B	5	5290	4 1/2 x 6 1/2	36x5	40x6d	D	Rwa, F. W.	5	5500	4 1/2 x 6	36x6	40x6d	W	Triumph, G	1	1995	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W
Master, F	5	5440	4 1/2 x 6 1/2	36x5	40x6d	D	Rumely, A	1 1/2	2720	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Twin City, B. W.	2	3000	4 x 5 1/2	36x4	36x7	I
Master, Trac., T	6	3740	4 1/2 x 5 1/2	34x4	36x4d	I	Samsen, 15	1 1/2	.....	.....	32x4	32x4	B	Twin City, A. W.	3 1/2	4400	4 1/2 x 6	36x5	40x5d	W
Maxwell, 1 1/2	1 1/2	1332	3 3/4 x 4 1/2	32x3	32x4	W	Samsen, 25	1 1/2	.....	.....	35x5	35x5	B	Twin City, FWDB	3 1/2	4750	5 1/2 x 6	36x6	36x6	I
Menominee, HT	1	2080	3 1/2 x 5	34x3 1/2	36x5	W	Sandow, G	1	2295	3 1/2 x 5	34x3 1/2	34x5	W	Twin City, FWDA	5	5250	5 1/2 x 6	36x7	36x7	I
Menominee, H	1 1/2	2725	4 x 5	36x3 1/2	36x5	W	Sandow, CG	1 1/2	2590	3 1/2 x 5	34x4	34x6	W	Ultimate, A	2 1/2	2800	4 1/2 x 5 1/2	36x3 1/2	36x5	W
Menominee, D	2	3215	4 x 6	36x4	36x4d	W	Sandow, J	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x7	W	Ultimate, AJ	3	3750	4 1/2 x 5 1/2	35x5 1/2	38x7 1/2	W
Menominee, G	3 1/2	4270	4 1/2 x 6	36x5	36x5d	W	Sandow, M	2 1/2	4295	4 1/2 x 5 1/2	36x5	36x5d	W	Ultimate, B	3	3850	4 1/2 x 5 1/2	36x4	36x7	W
Menominee, J3	5	5450	4 1/2 x 6	36x6	40x6d	W	Sandow, L	5	4975	4 1/2 x 5 1/2	36x6	40x6d	W	Ultimate, BL	3	3850	4 1/2 x 5 1/2	36x4	36x7	W
Moline, 10	1 1/2	2450	3 1/2 x 5	34x5 1/2	36x6 1/2	I	Sanford, 25	5	3350	4 1/2 x 5 1/2	36x4	36x4d	W	Union, F W	2 1/2	3490	4 x 6	36x5	36x8	D
Moreland, 20N	1	2850	3 1/2 x 5	35x5 1/2	36x6 1/2	I	Sanford, 35	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Union, H W	4	4485	4 1/2 x 6	36x6	40x12	D
Moreland, 20B	1 1/2	3125	4 1/2 x 5 1/2	36x4	36x6	W	Sanford, 50	5	5100	4 1/2 x 6	36x5	40x6d	W	Union, J W	6	5800	5 x 6	36x6	40x14	D
Moreland, 20C	2 1/2	3900	4 1/2 x 5 1/2	36x4	36x8	W	Schacht, 2-Ten	2	3550	4 1/2 x 5 1/2	36x4	36x7	W	United, A	1 1/2	2445	3 1/2 x 5 1/2	36x3 1/2	34x5	I
Moreland, 20G	3 1/2	4975	4 1/2 x 6	36x5	40x5d	W	Schacht, 2 1/2-Ten	2 1/2	3850	4 1/2 x 5 1/2	36x4	38x4d	W	United, B	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	I
Moreland, 20J	5	5350	4 1/2 x 6	36x6	40x6d	W	Schacht, 3 1/2-Ten	3												

MOTOR WORLD

for
DEALERS, JOBBERS AND GARAGEMEN

Vol. LXVI

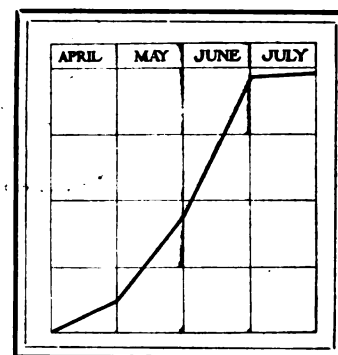
New York, U. S. A., Wednesday, March 30, 1921

No. 13

Restoring the Old Masterpiece



Is Your Sales Curve Going to Look Like This? →



THE automotive industry is engaged in its annual pastime of taking its salesmen up on a high hill, showing them the whole world and telling them it is theirs.

In some recent spring seasons this has been a harmless pastime.

The world was the salesmen's. All they had to do was to descend from the hill and take possession.

This year the world is there but the salesmen will have to fight for possession.

March has exploded all claims that there would be no business, that buying power was dead.

March, with a steadily increasing demand in all automotive lines, has shown that buying power not only has survived but is very much alive. But it is bashful. It isn't rushing into salesrooms and calling up on the telephone to demand recognition. Sometimes it seems to be hiding—which brings us back to the head of this story and the sales curve.

THERE is a chance for every merchant in the automotive field to go through April, May, June and July, normally the months of peak sales and peak profits, with a normal sales curve.

But the curve will have to be *built*. It won't just happen.

And this means that the salesmen, descending from the hill to fight for possession of the world of sales, will succeed in their fight in proportion to the completeness of their equipment for fighting.

The salesmen are entitled this year to something more than permission to go to it. They are entitled to the best equipment which the dealer can give them—

- 1—To find prospects.
- 2—To interest prospects.
- 3—To convince prospects.

IT is going to cost dealers money to provide this equipment, and some may ask, "Is it worth while?" which prompts us to break the thread of the story for a moment to present some evidence:

Exhibit A—Passenger car production for March reached 40 per cent of normal—and it is production based on orders, not prospects.

Exhibit B—Truck production in 24 factories checked up this month was 33 1/3 per cent of normal, as compared with 16 2/3 per cent during the low period running from October to February.

Exhibit C—Parts manufacturers have reached 40 per cent of normal production and are increasing forces every day.

Exhibit D—Accessory and equipment production is being speeded up to meet actual demand, and the head of the Automotive Equipment Association—the jobbers' and manufacturers' national association—estimates that the volume of 1921 business will exceed that of 1920.

Exhibit E—Tire production is well under way again, recognizing the inevitable demand for tire equipment for

almost nine million cars and trucks in operation and for an additional million or more to be built this year.

THERE is the evidence. Production of the merchandise of the industry is gaining momentum with every day's advance into the spring selling season. *Merchandise is being built only on order; yet it is being built, which means that somebody is selling it.* It is going to be built in increasing quantities as the business curve of the industry rises, as it always rises, through April, May, June and July, and somebody is going to sell it. And the dealers who sell this merchandise, those whose business curve rises with the curve of production, will be those whose salesmen, whether they have one salesman or a dozen, are best equipped—let's say it again:

- 1—To find prospects.
- 2—To interest prospects.
- 3—To convince prospects.

A dozen different dealers have a dozen different ways of doing these things and every salesman has some ways of his own that are different from those of brother salesmen on the same staff, but there are three kinds of equipment for the salesman that should command the attention and thought of dealers right now:

- 1—Advertising.
- 2—Display.
- 3—Demonstration.

There is nothing more discouraging to a salesman than to have to go out and by actual leg-work find his prospects. He will always have to do more or less of this work, but he will have more time and energy for his supreme task—convincing prospects—if advertising, display or demonstration, or all three combined, have found them, interested them to the point where they are real prospects—not mere names—and in some cases even partly convinced them.

It's a Normal Spring Curve for a Normal Year and

THIS is going to be a normal year for those who sell—and the chief aids to selling are advertising, display and demonstration. Why not plan them?

TAKE the passenger car dealer. He advertises his car of course. Most likely he displays it. Probably he demonstrates it when a salesman has worked a prospect up to the point of demonstration. But how well does he advertise? *Does his advertising promote the ideas of display and demonstration?* Does it make the reader so desire to see the car or to try it that he places himself on the dealer's prospect list by calling at the salesroom or telephoning for a demonstration—another real prospect that the salesman didn't have to do any leg work on? Read this from a big city car dealer's ad:

There is only one way truly to appreciate the merit of the ———. That is to ride in and drive this able car. We invite you to do this, knowing that such an experience will best reveal that faultless performance which makes the ——— car so delightful to own.

Then there's the display. Is it attractive enough to make passersby come in? Is it changed frequently enough so that the frequent passerby has an occasional new interest, which eventually may draw him inside?

Then there's demonstration. Do you wait until the salesman thinks the prospect is about ready to sign or *do you get prospects by demonstration?* Do you put your car in the civic parade, carrying perhaps four or five men who own cars or are going to, some day. Do you happen around at the golf course or the ball game occasionally and pick up a man or woman, or several, who have the power to buy a car like the one you sell? Could you promote a contest to demonstrate fuel saving, with your car as one of the demonstrators?

And to find, interest and help your salesmen convince prospects are you making all the use that you might of sales letters and other direct-by-mail advertising?

TAKE the truck dealer. He can advertise—in the newspapers, through sales letters and other sources—that his truck will do certain things in certain classes of transportation. *He can find, interest and, in a degree, convince prospects by advertising what his truck will do, not merely what it is made of.* He can accomplish something, if not as much as the car dealer with his appeal to the beautiful, by display. He can do a great deal by demonstration. Not only can he demonstrate his truck for the prospect who has shown interest, but particularly in the country where knowledge of truck transportation is limited, he can locate prospects by demonstrations conducted for that very purpose, demonstrations advertised

before and after the event for the express purpose of getting names of potential truck buyers.

TAKE the accessory or tire dealer or the merchant who handles both lines. *Does he advertise at all, and if he doesn't, could he bring business to his store by newspaper displays and circular promotions of seasonable goods?* Would it be worthwhile to circularize periodically and at least once a season to send an individually typed letter to the car and truck owners registered in his territory, telling of the facilities of his store to meet their accessory needs?

And is the accessory dealer taking full advantage of his chief selling argument—display? Is there a well displayed line of merchandise, frequently changed and always clean and neat, in the window where the gas and oil customer is bound to see it? Is there a showcase display, equally neat and fresh, in the office where the gas and oil, storage or repair customer pays his bill, or in the runway through which the customer drives? And is there an attendant—the boss himself, the girl assistant, an accessory clerk or someone ready to turn into a sale the prospect's interest in the merchandise displayed?

WE are just getting into spring, the season of greatest sales opportunity in all branches of the automobile business. It is merely trite to say that those who sell will get the greatest return out of the opportunity. *There is greater need than in any recent season for employment of AIDS TO SELLING and the chief aids are advertising, display and demonstration.*

How much will you advertise and where? Ask your distributor, your jobber and the factory or factories which manufacture the merchandise you sell to help you plan the most effective advertising.

How will you display your merchandise? Again, get ideas from your manufacturer and wholesaler, who undoubtedly have some effective display plans.

How will you demonstrate? Particularly in the accessory field manufacturers and jobbers have worked out some striking plans of demonstration. Some of these have been used at the shows and some are adaptable to accessory salesrooms, where they draw attention not only to the article demonstrated, but to the dealer's entire stock.

AREN'T your chief aids to selling worth a plan as the selling season begins? *Wouldn't it pay to work out a complete FOUR MONTHS' PLAN OF ADVERTISING, DISPLAY AND DEMONSTRATION?*

Think it over.



3 Successful Plans That Help Dealers to Move Used Cars

- 1—United Dealer Effort
- 2—Association Appraisal Plan
- 3—Individual Dealer Publicity

WHAT shall be done to keep the used cars moving?

There is every indication that a large proportion of the new car sales of this spring will be of the replacement type—which means a heavy trade-in market.

In this article are presented three plans that have been successful in “clearing the decks” for the spring selling of new cars. They include:

- 1—United dealer effort aided by newspaper advertising.
- 2—Association effort in appraising and selling.
- 3—Individual dealer effort through classified ads and circulars.

Each of the plans contain ideas that may be useful in part or in whole for the dealers who are wrestling with this problem at the present time. Let's read on.

How United Dealer Effort Was Assisted by a Newspaper

NOT so long ago the dealers of Kansas City were bemoaning the presence in their midst of a large and entirely unwelcome number of used cars. Sales were slow. They were getting ready for their annual show—it was to be the “show of shows” for Kansas City, and—well, those used cars were a disturbing influence and they had to be moved.

Just at that moment the advertising manager of a Kansas City newspaper came to them. He said he wanted to help **SELL** those used cars.

“We will give the dealers space to arouse interest in the immediate purchase of used cars,” he said.

The dealers, through the association, prepared ten reasons why used cars should be bought “now!” The newspaper ran these reasons, day by day, in three-inch double column space.

The dealers and salesmen read these advertisements—and dog-gone if they didn't believe what the ads said! They went out aggressively after buyers—and began to find that people were ready to buy.

Many of the dealers kept open house Sundays. All hustled like blazes for prospects; and even those who did not

advertise for Sunday business brought the prospects down to the salesrooms nights, or any other time.

Things began to move. Maybe the time was ripe. Several dealers were reporting sales of new cars. It was evident that the effort had unearthed people with money who were getting into a frame of mind to spend it.

The newspaper helped further with a “top-head” story, with the following caption:

USED CAR BARGAINS NOW

Dealers Here in Campaign to Dispose of Stocks on Hand

Prices Have Been Forced to a Level Where Very Desirable Purchases Are Available—Cite Ten Reasons

The story said: “The used car market in Kansas City has reached a level where many real bargains are available to motorists desiring vehicles in that class. The recent depression in the motor car industry has left many of the dealers here in a position to offer machines at prices far below any former marks.

“Dealers are concentrating this month on an effort to dispose of these machines. The dealers' organization is citing these

ten reasons ‘why you should buy a used car now.’”

Then follow the reasons—given in different language than that of the advertisements in which they appear from day to day.

In the display space the ten reasons are given thus:

1—Prices on used cars have been cut in keeping with the reduced prices on new cars. These reductions make loss practically impossible from any conditions affecting new car prices.

2—Dealers offer you a larger selection of used cars now than they will have in the spring.

3—No further reductions in new car prices are probable—while increases are not improbable.

4—A shortage of cars is sure to follow the curtailed production of new cars.

5—Next spring the demand will exceed the supply—making closer markets, stronger competition in buying and tending to higher prices.

6—The motor car industry has overcome the curtailed financial support—another element that tends to higher prices.

7—An increase in new car sales in-

volving "trades" has resulted in larger stocks of used cars. With insufficient winter storage space and large investments in used cars, dealers prefer to sell now at greatly reduced prices.

8—You will benefit from the use of the car during winter months.

9—Practically the same high grade service of a new car is obtainable in a used car at a greatly reduced price.

10—Buying a used car now, based on to-day's valuations, from a reputable dealer is protection against loss from any conditions that may affect the new car industry or market.

The newspaper carries much used car advertising. And it promotes this advertising, and its effectiveness, while it is boosting the purchase of used cars.

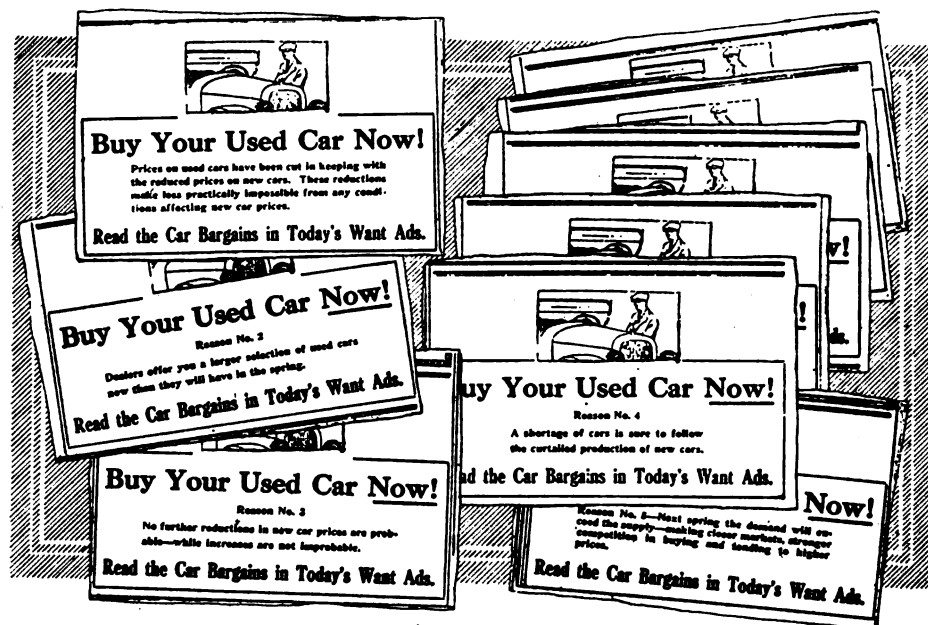
How Association Helps in Appraising and Selling

MEMBERS of the Saginaw Automobile Dealers Association are pursuing a unique method in handling used cars.

Each member carries in his pocket a small loose leaf book in which is contained each dealer's valuation of every model of the particular car he handles extending back a period of five years. These values are arrived at through actual experience, and are the maximum allowance. It is stipulated, of course, the car must be equipped with good tires and must be in good condition.

Every dealer makes duplicate copies of the valuations of his cars in sufficient number to supply every other dealer with a copy, thereby giving them at hand at all times accurate information as to the value of every car offered for sale or in exchange.

The association members gather for



How a Newspaper Helped Move Used Car Stocks in Kansas City

A Kansas City newspaper prepared and published these ads prominently to aid the dealers in moving their used car stocks. You can get the co-operation of YOUR newspapers if you interest them in the necessity of stimulating the used car market. Why not tell them what the Kansas City newspaper did

noon luncheon each Monday and discuss business affairs.

The success of the used car method in vogue here is but another instance of the strength of the local organization. The members meet once a month, and absenteeism is not tolerated, there being a heavy fine assessed against any member who is absent, no matter what reason may be assigned other than illness. Members are required upon joining the association to deposit a fixed sum, which is held in the treasury at all times. In the event of a fine for in-

fraction of the absentee ruling, there is no trouble about collection, for the simple reason that the treasurer checks off the amount of the fine from the dealer's deposit thereby reducing the latter to that extent. As a result, attendance at monthly meetings averages around 90 per cent. This, in face of the fact that there are about 30 dealers who are members of the organization and more than 100 garagemen who are subject to the same rules and conditions as dealers, although they have no voting power on association policies.

How Ads and Circulars Help Sell Used Cars

CLASSIFIED advertising and circularizing are the methods principally employed by Willys-Overland, Inc., of Buffalo, in attracting customers for used cars. Of the two, this concern has found the classified ads the more effective. For this effort the company selects newspapers which have established reputations as good classified advertising mediums. Space three to five inches, one column, is used to tell the story—to sell the institution. These ads carry descriptions of the special time-payment plan, under which prospects may select cars and make small payments over a period of time, taking possession when one-third of the purchase price has been paid, and similar selling features. The ads are changed from time to time, and occasionally lists of the cars for sale are published.

Willys-Overland, Inc., also has great faith in circularization. Its cleverly worded and attractively printed circulars, often made up in colored inks and on colored paper, are distributed regularly among employees of industrial plants, to pedestrians and in the homes.

In circularizing an industrial plant, the company stations some of its younger salesmen at the factory exit. Often the salesmen mingle with the employees at noon as they play ball and indulge in other sports. The company also selects certain sections of the city in which the salesmen make house-to-house canvasses, distributing the circulars. Care in the selection of the territories thus covered is taken, and parts of the town where it is reasonable to expect the housewife will answer the door bell are chosen.

Cars accepted in trade-ins are care-

fully appraised and thoroughly overhauled before being resold. The total cost of improvements, including parts and time, is considered in making the appraisal and in setting the re-sale price. Improvement always includes repainting the car, for the company believes that a new coat of paint helps materially in selling it.

When the car has undergone its renovation and is ready for re-sale, its advantages are recorded in classified ads and in circulars.

Even after the sale is effected, Willys-Overland, Inc., keeps in touch with its purchasers through sales letters and circulars, offering additional service and retaining the good will of the purchasers of used cars, and keeping them in line for the sale of a new car at some future time.

How Does the Trade Meet YOUR Salesmen?

Does It Welcome Them
With Open Arms?

This Story Tells How a Providence Accessory Jobber Creates Demand in His Territory.



WOULDNT this be a wonderful world for the jobber if, every time his salesmen called upon the trade, they found it waiting for them with open arms—and welcomed them as deliverers from an insistent consumer demand.

A dream? Well, not altogether.

A trade condition approaching this is possible. *The secret is the creation of consumer demand by the jobber*—the creation of this demand in such an effective manner that the pressure is exerted upon the jobber's dealers at the psychological time so that when the salesmen call the dealers are strongly "in the market" for the jobber's product for which the demand has been created.

THE Franklin Auto Supply Co., automotive equipment jobber in Providence, R. I., is doing just this thing. By a system of sales letters and circulars it is reaching every automobile owner in the territory comprising Rhode Island and eastern Massachusetts and directing the consumer demand into the salesrooms of its dealers.

This concern operates a complete prospect file containing the names of the car owners of its territory classified according to the make of automobile and commercial vehicle owned. Daily reports of car registration in the States keep this list up to date.

When a particular piece of automotive equipment is selected, upon which to make a special sales effort, a sales letter and circular is sent to each of the car and truck owners who should be interested in it. The length of the campaign and the method of preparing the letters and circulars, of course, depend upon the product that is being pushed.

When, from various obvious sources, the Franklin Auto Supply Co. feels the demand generated by the sales effort the salesmen are sent into the

territory to make a special of the particular article that has been exploited direct to the consumer. It is not difficult to imagine the frame of mind concerning the article that the dealers have when the salesmen call. Neither is it difficult to imagine, under this plan, how the jobber often is able to turn over within a few weeks a large volume of business in an accessory.

The fact that the demand is created with the consumer insures an open channel through the dealer, and the quick movement of the article from the dealer's shelves.

The House That Service Built

The operation of this selling plan is only one of the things that has made the Franklin Auto Supply Co. one of the fastest growing jobber concerns in the New England territory.

The whole story is an absorbing business romance, the title of which should be "The House That Service Built."

Back in 1914 Harry R. Rosen bought an eight-car garage in Providence. He ran it a month and lost \$60. Then he built a show window and a tiny room on one side of the

garage. In this he placed a small stock of accessories. Soon the accessories had turned the loss into a profit—so he reduced the size of the garage and increased the size of the accessory store. He has continued the process until now his accessory store and tire repair business occupies an entire three-story building. The garage—what is left of it—is used exclusively for Rosen's own cars.

The business is known now as the Franklin Auto Supply Co. Its slogan is "The house of service." On every piece of literature that leaves the place, on sign boards, which are numerous on the roads throughout the territory, in every contact with the public there is impressed the word "service."

And the product of this policy of service is satisfaction—satisfaction to the dealer and to the consumer. This linking of service and satisfaction with sales is bringing customers back to the jobber—and increasing business.

And let it be known that the Franklin Auto Supply Co. sees to it that customers come back. In fact, the whole merchandising plan of the busi-

ness bends toward this end. Even the name of the company is significant in the plan to make it easy to remember and easy to find. The store is at the corner of Broad and Franklin streets. Broad is the main thoroughfare, but Franklin is a cross street. In order to make it easy for people to remember the location, Franklin was made prominent in the firm name. The picture of Benjamin Franklin in the advertising and on the road signs helps imprint the firm name.

Still another method is used to make it easy to remember the name when once seen: The company has adopted orange and chrome yellow as its color, and this predominates in letter heads, bill heads, circulars, road signs, etc. The front of the store combines these colors.

The association of a certain color with the business makes it easier to connect all of the advertising with the store. The effectiveness of this association of color with certain business organizations often is utilized in chain store and other national distributing organizations.

Another advertising angle that this concern uses and one which most

business men neglect is advertising to and through school children. Rosen intends to stay in business. He knows that the school children of to-day are going to be his customers to-morrow, and he believes that if he impresses the children to-day with the name of his store, they'll remember it to-morrow, when they are buying automobile equipment. In this connection Rosen uses blotters and other novelties that interest school children. This effort is also cashing in to-day, because, through the children, parents are learning to know the Franklin Auto Supply Co.

This concern started with Ford parts and has continued to add other automobile parts and accessories until now it carries a very complete stock, including several makes of tires. Each item stocked, however, must have its demand. The fact that ultimate profit depends upon turnover is never lost sight of. As a result of careful selection the stock is turned over about four times a year.

The fact that the Franklin Auto Supply Co. is just as much interested in the rapid turnover of the stock it sells to the trade, and goes out into the

territory to create the demand and help sell the goods has much to do with the success of the business, of course.

As evidence of some of the things that have won a reputation for service for this company, a can of kerosene was kept handy for filling oil tail-lights. Since, in the old days when these lights were more prevalent, drivers were getting into trouble with the traffic officers through forgetting to attend to these oil tail-lights, this little courtesy of refilling the lamps of customers free was appreciated.

Free tire installation on the road within a reasonable distance of the store was also a feature of Franklin service. No really expensive work, however, was done without making a charge for it.

All of the service was given with a view of making it easier to do business with the company. And that's what Franklin service did. It made people want to trade with the company. It SOLD the Franklin Auto Supply Co., and the reputation that the firm earned in the earlier days is the mainstay of the rapidly increasing jobber business of to-day.

How Canadian Dealers Sell Accessories

A Few Striking Displays Described

By ERNEST A. DENCH

IN a country where one person out of every twenty-four owns an automobile, it is only to be expected that there should be keen competition in the retailing of automobile accessories. Competition always makes for progressiveness, with the result that most Canadian automobile accessory window displays are a credit to their owners.

These are my impressions after covering every section of Canada (Maritime Provinces excepted) over the Canadian Pacific Railway. Several of the display methods that favorably impressed me will be found below.

The Tire as Display Fixture

Emson's, Medicine Hat, Alta., laid an auto tire flat on the floor in the middle of the window. Small accessories, such as spark plugs, were grouped inside the tire circle. This method, simple though it was, was an improvement over the hodge-podge arrangement of small accessories that are too often seen. The method permitted of it being elaborated upon with a tire at each side and different accessories for certain purposes inside each tire. The small articles are oftentimes the hardest to display, because there are so many of them competing for window display attention.

The Non-Skid Chain Trim

J. & T. M. Piper, Fort William, Ont., featured non-skid chains in one of its

show windows. Non-skid chains were hung across the rear, just above the level of the eye. On shelves above were cardboard cut-outs that were supplied by the chain manufacturer, while another cut-out occupied the floor at the rear center. Hanging partially out of their cotton bags at either side were more of these non-skid chains. Down in front were groups of motor oils, with oil cans and other accessories placed on the floor in between. Along the beveled edge of the window glass was a non-skid chain, outstretched from end to end. The window glass was covered in the same manner by two non-skid chains, placed about two feet apart.

Free Pennant Stunt

Some tourists are great pennant fiends, and the McRory & Millar Co., Virden, Man., set themselves out to attract this desirable custom by a special offer, which was given display publicity in the local newspapers. Here is the announcement containing the offer in question:

"Automobile Owners—Get a Pennant Free. Follow the good roads to Virden and then direct your car to this store; purchase to the value of \$1.00 or over anything in this store and receive

FREE
A PENNANT FOR YOUR CAR.
"We make this offer to extend our acquaintances list. Every car should have a pennant, get it here, free."

The value of the pennant was somewhat exaggerated—as it was the kind

one can buy in any Woolworth store in Canada for fifteen cents—but it was the character of the offer that counted, rather than the value of it. The walls of their window were decorated with different colored pennants of Virden.

The Free Battery Drink

Engineering Services, Ltd., Toronto, Ont., resorted to stunt tactics in order to increase its battery business. There was a large water cooler in the middle of their show window, the cooler being filled with fresh filtered water. A card laid against the water cooler announced:

"Give your battery a drink. It's free."

The cooler was surrounded by batteries for different types of machines.

Ensuring Prompt Counter Service

To enter the establishment of Costello & Crowe, Ottawa, Ont., is almost like rummaging around a department store. Placed on their counters for quick service were recharge batteries, with the price tags attached.

An All-White Color Scheme

Costello & Crowe's window was devoted to a display of automobile non-glare lenses. The trim was covered with white crepe, the lenses being placed at equal distances apart. The crystal white of the lenses and the snowlike whiteness of the crepe paper provided an excellent color contrast.

CRASH! *Went Previous Show Records at Detroit*

*With Greater Attendance, More Interest and More Sales
Than Any Previous Exhibit, Detroit Plunges Into Strong
Spring Selling Season*

By R. H. BURLINGAME

DETROIT, March 26.

RECORDS for attendance, general and individual interest and actual sales were shattered at the Twentieth Annual Exhibition of the Detroit Automobile Dealers' Association, which closed here tonight. Final figures for the week's attendance show a total of 86,446. The attendance for last year was 77,310. The opening night crowd reached 12,000, 5567 of which were paid admissions. Incomplete sales reports from 51 dealers showed a total for the week in excess of 400 cars.

Bridging the gap between winter and spring, the show date was most opportune and truly can be said to have inaugurated an era of renewed activity which gives every evidence of permanency. With 62 cars sold the opening night—a figure establishing a record—each day has brought enthusiastic reports from distributors. Sales on the opening night proved the big surprise of the week and convinced association officials that the buying in reality has begun.

FEAR that recent conditions would have a depressing effect both from the standpoint of attendance and sales, prompted the issuance of thousands of opening night tickets which were distributed by manufacturers and dealers. At the same time dealers took buyers into their confidence and orders were dated March 19th in order that they might be listed as "opening sales" at the show. As if in support of the combined efforts, fate or just normal common sense intervened and started a buying movement that resulted in 40 actual bonafide sales Saturday night to be added to the 22 which had been pre-dated.

With the unexpected increase in opening attendance dispelling all semblance of gloom, representatives of sales organizations entered spiritedly into the selling contest with results that foreshadow a new era in automotive merchandising. President A. L. Zeckendorf, Manager H. H. Shuart and the directors of the D. A. D. A., with the idea of creating optimism and attracting attention, went to extremes in show preparations with the result that the exhibition from the point of car, truck and accessory display was exceptional.

More than 300 passenger cars, 60 trucks and 40 accessory exhibits were arranged attractively about the 3½ acres of floor space, the decorative setting, depicting the Pompeian era, furnishing a charming background for the splendid mechanical display. Many features combined to make this year's show the great success it was. Chief of these, of course, was the handsome new Morgan & Wright building so admirably adapted to the purpose and so easy of access. The manifest interest of Morgan & Wright officials in the welfare of the industry was attested in their efforts to speed up contractors who worked feverishly during

the last few months to get the building in readiness for the show.

The fact that 11 cars were given their first Detroit showing, while two of them made their debut into the realm of quality cars under D. A. D. A. auspices, necessarily stimulated the attendance and helped to set the record. The 150,000 square feet of floor space in the exhibition hall, giving the exhibit the distinction of being one of the largest one floor shows ever held, furnished sufficient accommodation for all exhibitors without encroaching on the wide aisles designed to furnish ample room for the throngs.

Lessons learned at the New York and Chicago shows guided association officials with the result that there was a notable lack of criticism of any feature. The apparent determination on the part of 1921 buyers to scan the offerings with the critical eye, prompted Manager Shuart in so arranging the lighting effect as to give full opportunity for minute examination of every portion of every car from any angle. The musical programs were so arranged as to greatly enhance the pleasure of the visitors, and at the same time detract as little as possible from the business at hand, that of examining and buying and selling cars. In the absence of President Zeckendorf, who was called to New York by the illness and death of his mother, Vice-President Harry Graham and Acting Mayor John C. Lodge, formally opened the exhibition. With the formal ceremonies over, visitors and salesmen went to the business of buying and selling with a zest that proved a most agreeable surprise.

Each day was given significance by a formal designation. Saturday was "Opening Night." Sunday "Automotive Equipment Day," Monday "Manufacturers' Day," Tuesday "Ship by Truck Day,"

Wednesday "Michigan Day," Thursday "Detroit Day," Friday "Buy Your Car Day" and Saturday "Old Timers' Day." Manufacturers from Detroit and other cities were on hand Monday and many factory executives remained in their dealer booths throughout the entire show.

It was noticeable throughout the show that no one particular group or class of cars appeared to have an advantage over the others. The display signs for the various exhibits added greatly to the public's convenience. Large blue silk banners lettered in gold were conspicuous from all parts of the hall.

There naturally was a contest among the dealers as to the honor of making the first show sale, but they came in such numbers a half hour after the show opened as to make the contest virtually a draw. Thereafter reports were coming constantly of sales throughout the week.

Interest in the commercial car exhibit was keen throughout the week though Tuesday, which had been named in honor of the truck as a transportation utility, proved one of the best of the entire week from the standpoint of attendance.

Actual sales and what dealers termed real prospects, showed plainly that reports of increasing truck activity were not exaggerated and indicated a sharp upward movement that gives promise of marking the real start of 1921 business. On Tuesday, a parade, in which every make of truck and commercial car was included, was held through the business section and disbanded at the show building. Throughout the day and evening visitors were entertained at intervals with moving pictures of trucks in inter-city hauling, commercial cars in quick delivery roles and army trucks in actual operation on the battlefields.

Merchandising Displays

Were Numerous in Detroit's
Twentieth Annual Show



Looking down one of the main aisles. This view shows the beautiful Pompeian decorative effect—carried out throughout the main exhibition. Rugs were used in several exhibits, enhancing the appearance of the floor jobs.

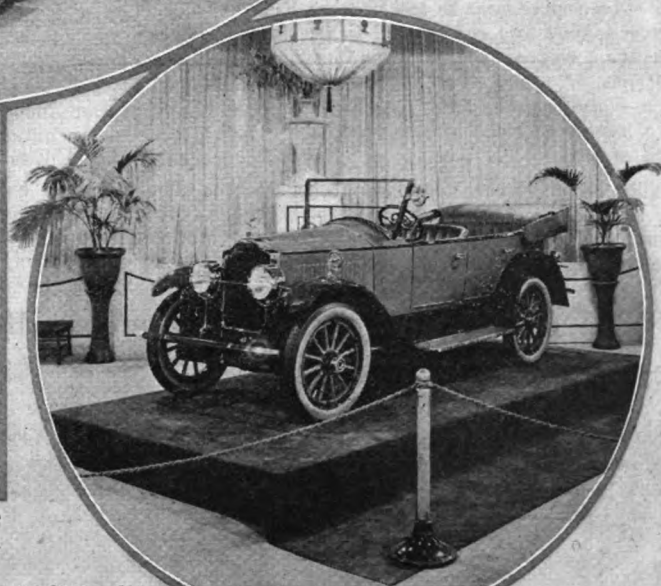


A corner of the accessory exhibit. Wide aisles and real merchandising exhibits made the displays particularly impressive.

The R. & V. Knight display showed cars with tonneau windshield, bumpers, spot-light, and many other conveniences that enhanced desirability when viewed by the visitors.



Trucks were displayed in surroundings similar to those provided for passenger cars. This view shows how T.M.C. and Kelly-Springfield trucks were shown.



A particularly beautiful and effective display was secured by Packard for the Single-Six. The car, on a platform, was given striking prominence. It was a particularly strong merchandising exhibit.

Illinois Automotive Trade Association Shows Remarkable Growth

Many Progressive Ideas Developed at Big Two Day Meeting in Peoria—H. B. Pinkerton, President

THE employment of salesmen on a strictly commission basis, the used car exchange as a solution of the used-car problem, good roads, taxation, legislation, the value of association work and kindred subjects of interest to the industry were taken up at the second annual convention of the Illinois Automotive Trade Association held at Peoria March 21 and 22. This association, though formed only a year ago, is now reported to be the third in the country in point of membership with its numbers steadily on the increase.

The association went on record as favoring:

1—*The providing of police protection for the highways of the State of Illinois.*

2—*The combining of two roads over the same route for certain distances wherever possible if such action will shorten the mileage of road construction. This resolution was adopted in view of the fact that the original mileage provided under the \$60,000,000 bond issue voted in the State cannot be built with the funds available.*

3—*The construction of improved highways at the earliest possible date and the establishment of a patrol system for the proper maintenance of roads where State routes have been designated.*

4—*An amendment to the present State motor vehicle law introduced in the Legislature imposing an indeterminate sentence of from three to twenty years on a motor vehicle thief or the receiver of a motor vehicle knowing it to have been stolen.*

The convention was held for two days, the sessions being held at the Jefferson Hotel. There were delegates present from all the affiliated organizations and

a number of individual dealers who are not members of any association for the reason that there happens to be no association in the city where they do business.

The question of the advantage or disadvantage to a dealer of employing salesmen on a strictly commission basis arose during the discussion of the used car problem in the forum, which was conducted by Leo A. Peil, retiring president of the Chicago Automobile Trade Association. The plan of the used car exchange in Quincy had been outlined by Morris Adler, president of the trade association of that city, when one dealer raised the question of what would be done in the case of a salesman who, working on a strictly commission basis, accepted a trade-in on a new car sale and sold the trade-in himself without reporting the transaction to the dealer. Such a procedure aroused considerable discussion. The point was raised that likely within a reasonable length of time the buyer of the trade-in would report back to the dealer any deficiencies in his purchase and look to him for relief. The dealer, thereupon, would find that the buyer's name had not passed through his office, that there was no record of any such purchase, and that confusion would result. Harry G. Moock, general manager of the National Automobile Dealers Association, cited a case of a dealer who found that his salesmen, employed on a commission basis, were not dependable in many cases and who, thereupon, with good results, placed the men on a sufficiently large salary to give them proper incentive to get business. What the exchange would do in such a trade-in case was left in abeyance.

The used car exchange, as the means of meeting the used car problem, was not wholly approved. In addition to the Quincy plan it was shown that the deal-

ers in Saginaw, Mich., have adopted some such arrangement which is just under way, and the success of which is being studied. The present and more general method of taking used cars on new car sales was pointed out in one instance of being destructive of association unity.

Moock, in his address to the association, spoke of the Federal taxation program, conditions existing in various sections of the country, the dealer contract, of the joint meeting scheduled for Detroit April 21, of committees from the N. A. D. A. and the National Automobile Chamber of Commerce, and the necessity of amending the national law to meet the bootlegging evil. He spoke at length on the value of association work.

An evidence of this value was shown at the meeting when it was brought out that on the following day the Secretary of State of Illinois would hear arguments on a bill which has been drawn up fixing the price for the first set of dealers' plates at \$50 and subsequent sets at \$2 a piece. The cost under existing law is \$12 a set. The State association voted to oppose the change, so that the small dealer might be protected, and to join forces with the Chicago association in opposing the proposed law. It went a step farther and appointed a delegate to speak for the association and, moreover, started him on his way immediately. If it is possible to do so the definition of a recognized dealer will be inserted in the law to put a stop to curb-stone selling, to the selling of cars by a resident of a community who, through an arrangement, is enabled to obtain a discount and who sells the cars to personal friends less the discount. Farmers and physicians were cited as doing such business.

(Continued on page 38)

Illinois Automobile Men at Big Trade Meeting



Is There A MOSES IN YOUR BULRUSHES?

By RAY W. SHERMAN

THAT'S all very fine!" lamented Henry Bennett, who sold the Red-man in Callawassa, "but I'm getting sick and tired of the whole business. I'd sell the whole mess for a small price and get a job, if—if—"

"If you didn't hate so to work," laughed Reilly, the seller of Sennetts in and about Callawassa.

"Kid me—that's right—kid me!" Bennett declared. "This automobile business is the worst mess of a thing I ever got into. First it's trouble with the salesmen, then with the mechanics, then with the cars, and then with this, that and the other thing until I'm about ready to chuck the whole thing and QUIT!"

Business of banging a fist on the desk. "Hum-m-m," hum-m-med Reilly. "Bad as that?"

"Worse!" Henry insisted. "To-day it's the shop! I've a good notion to close the darned thing up and let folks go where they will to get their work done. I'm sick and tired of trying to make anything out of it."

"Whazzamat?" Carusoed Reilly.

"Well," Henry explained, in a calmer tone, "the girl in the office all of a sudden took an interest in life and my business the other day when I was over at the factory and began checking over the accounts we have had with customers in the last year or so. And what do you suppose she found?"

"What?" duetted Reilly and Tommy Trumbull, who drifted in to hear the argument.

"She found," Henry went on, "that nearly all of them came in once, a few twice and none of them—or nearly none—three times. She asked me why it wouldn't be a good thing to get in touch with some of those who had been in our shop and quit coming, so we could find out if they were satisfied customers."

"Did you?" asked Tommy.

"I DID!" Henry shouted. "And I got an earful. I called up the first man on the list and said I was wondering if the repair job we did for him several months ago was giving satisfaction, and what he told me was plenty. He said we had the worst shop in town, he had to get the work done over, we overcharged him, our men insulted him, we got the car all dirty, we stole his tools,

we dented a fender and—and—he could remember some things that I've forgotten.

"After that bird got through with me I sat and gasped for a while. And then I called up another—and another—and another, and every darned one of them had much the same story to tell. Believe me! I began to worry—and I'm worrying yet—and I'm just about ready to chuck the whole thing and quit. I don't know what to do."

"Why not look over the shop and see what ails it?" Reilly suggested.

"I KNOW what ails it!" Henry declared. "It's the shop superintendent. He's a fine greasehound but a bum manager. He thinks customers should conduct themselves to HIS satisfaction rather than that he should operate for THEIR satisfaction; and he has no more idea about shop system and management than a snapping turtle has about making gaskets—nor as much. When I got him I thought he would be a wonder—and he's the same kind of wonder as all the predecessors I have hired as service managers."

Reilly leaned back in the chair and looked at Henry. There had been a time when the Sennett service station could produce the same kind of story. And getting the bugs out had been no easy job.

"Where'd you get that office girl?" Reilly asked. "The one who started this investigation."

"Oh, just found her. First job she ever had. Came with me several years ago; seemed to like the work and has been there ever since."

"Hum-m-m." Reilly made that musing noise which accompanies some men's reflections. "Have you any men in the shop who have been with you two or three years?"

"Oh, sure!" Henry enthused. "Several! Two or three of the boys out there are old-timers with me. Good mechanics, all three of them."

"Ambitious? Willing? Good workers?" Reilly asked.

"Couldn't be beat!" declared Henry. "Especially one of them—Higgs—fine young fellow—married—good workman



—on time every day—best man in the place."

"Could he be superintendent?" Reilly looked directly at Henry.

Henry looked directly at Reilly. Neither said a word for several seconds. Then Henry's face lighted with the illumination that comes with the dawn after the darkest night.

"I believe he could!" he exclaimed. "I KNOW he could! I'm sure of it! It's worth trying anyway. I'll try it —TO-DAY!"

"You know, Henry," smiled Reilly. "One thing that ails most of us is that we're so close to our own businesses we can't see them. We can't see what our organizations are made of. We can't see the ways and means for making our businesses better. We get all out of line with things. Our noses are so close to the grindstone that we can't see anything except the flying dust. We need to get up in the air a bit once in a while and take a good look at things."

"Often, when something like this bothers you, you'll find the answer to the problem right in your own shop. This girl in your office, if given half a chance at untangling some of your knots, may prove to be a wonder. Give her a chance. No reason why she shouldn't be your business manager—maybe your general manager."

"Probably there are two or three prospective foremen, superintendents, salesmen or something else right in your own shop. You know, being superintendent is more a matter of willingness and right qualifications than long experience. You don't have to go out to Chicago or to New York every time you want to hire a service manager or other competent person. You'll probably have better luck if you pick some one from your own organization. Every organization is full of potential leaders—if you'll only watch for them. You"—

"In other words," smiled Henry, "look in your own bulrushes for your own Moses."

"You said it," laughed Reilly.



Dollar Ideas

Earn a Dollar

MOTOR WORLD will pay \$1 each for ideas for this department. The ideas should have to do with sales and business management. The ideas should be in two parts:

- 1—The problem.
- 2—The solution.

But if you'll get the idea on paper in any fashion whatsoever, we shall be glad to shape it up for you. Do two things:

- 1—Help some other man.
- 2—Make a dollar for yourself.

The Helping Hand That Made a Sale

JUST his willingness to be of service to someone in trouble resulted in the sale of a Studebaker Light Six the other day by Larry Farwell, Studebaker salesman for the White Motors Co., New Haven.

Larry is of the old school. He has been in the automobile business for a great many years. In the old days, every motorist seeing another motorist in trouble would always stop and render what assistance he could. Larry has never gotten over this helpful habit and the other day as he was driving along he came upon a car which had just been wrecked by a motor truck. He pulled up to the side of the road and did what he could to assist the people who were in trouble.

Their car was such a complete wreck that they decided a new one was necessary and as Larry, with his Light Six Studebaker, had been of so much assistance to them and as the Light Six was just about the kind of a car they wanted, the result was a sale. Larry stopped to be of help at 10 A. M. and at 8 P. M. that evening he had the order.

It always pays to lend a helping hand to people in trouble even though sometimes it pays only in personal satisfaction of having done a good deed.

This Dealer's Advertising Must Have Local Appeal

ANORTHERN Wisconsin dealer says he is "off" of using advertising by experts living in other places. "They do not know local conditions well enough," he explains. "It is true that basically advertising appeal is essentially the same. Many of the experts are all right for city trade, but not for us folks up here in the woods. Now, I am planning a big campaign this spring and it will be a 'home talent' show. I will offer merchandising prices for the best ads produced by home people. I will not ask anybody to buy anything. None need even to know me personally. The one requirement is that the writer must be

the owner of an automobile or the son or daughter of an owner."

This dealer expects to get but few ready-to-use advertisements, but a great many ideas—more than that, peculiar slants, as he calls them.

The Human Appeal in Ads

IT is human to want things because other people have them. Popularity is always a strong recommendation. The Capital City Auto Co. of New Orleans



Six More Big Sixes for the 7-11 Auto Co.

What Studebaker Thinks of Advertising

"During the past seven years the Studebaker Corporation has spent \$4,000,000 for advertising, yet it fully recognizes that the quality of its products and the satisfaction they give customers are, in the last analysis, the real foundation for the rebuilding and perpetuation of its name."

ALBERT HUNSELL ERSKINE,
President Studebaker Corporation.



What I Know About Printers' Ink

A Tribute to The New Orleans Item

When it comes to marketing any commodity under the sun, there's a penalty of leadership—one that I gladly pay the first of every month—advertising bills.

Live and learn is an old saying that is well worth remembering, but then, too, the advertising is so much easier when there is someone about to give us the aid of their experience, and if my experience is worth anything to those who are endeavoring to sell honest merchandise through Twentieth Century Methods...my advice is—

TO KEEP HEALTHY, WEALTHY AND WISE, WORK LIKE ME—AND ADVERTISE

When I first came to town and advertised our slogan—"Watch to make New Orleans a Studebaker town"—there were those who said, "It's only an advertising scheme; the man's loco." Today I ask the question: "Who's loco now?"

Whatever anyone has something to sell that he is not ashamed of, let him ADVERTISE IT. This business of hiding your goods like Dante's Inferno has done her gold and diamonds and making the public dig for them is not being done by successful merchants and so it is that I today unhesitatingly say that next to work—treasure lies in the most valuable medium to buy business, that is, of course, if you have the goods to back your advertising up.



What better evidence can we offer of the Studebaker's merit than the announcement that on last Monday we delivered to the Seven-Eleven, an even half dozen Big Six Studebaker automobiles. This is the second order we received from this thoroughly live and awake livery concern. We are not going to get into the story of how these cars are put to the severest kind of usage in the livery business—how they are going night and day—that is told by Mr. Walton's re-order or he'll tell you about the



Studebakers himself. Ask him—ask any Studebaker owner about the service these cars give. Ask any Studebaker owner about the service our mechanical and parts department render. We'll base our claims on your patronage on the answer of any Studebaker owner as to what he thinks of the Capital City Auto Company, its product and its service.

Yes, we believe in Printer's Ink.

167,000 Miles

In a little over a year the Seven-Eleven Auto Company drove six Studebakers in the livery business a total of 167,000 miles, one of these cars having covered 33,000 miles. This is more than the average owner under the most favorable conditions would drive in four and one-half years.

When you stop to consider that this repeat order is viewed by a business house from a cold-dollar and cents viewpoint you can appreciate that comfort, reliability, economy and CONTINUOUS PERFORMANCE must have been the basic reason for six more Studebakers.

New Prices	
Big Six 7-pass.	\$2350.00
Special Six 2-pass.	\$1995.00
Special Six 4 and 2-pass.	\$1995.00
Special Six Sedan	\$3075.00
Special Six Coupe	\$2975.00
Light Six 5-pass.	\$1685.00

The above prices are on STUDEBAKERS delivered to New Orleans, fully equipped, including five COORD Tires, bumper and Motorizer.

Also Remember We Charge No Brokerage on Time Sales



Capital City
829 ST. CHARLES ST.



Auto Co., Inc.
PHONE MAIN 1100

It's human to want things others have. This is how a New Orleans dealer appealed to that human trait in advertising

recognizes this fact in its advertising. It also recognizes the fact that the time when business is slow is the time when advertising should be made more forceful.

These two ideas were utilized by the Capital City Co. in whole page advertisements used by them in the New Orleans newspapers. In these advertisements the human appeal is made by telling the readers that six other people bought cars from them recently. The accompanying picture shows one of the advertisements that is helping the New Orleans concern to get back to selling.

This "Ad" Is Still Making People Talk

ANY advertising "stunt" that is so unusual men tell their friends about it and comment upon the cleverness of the idea is undoubtedly good advertising. A Southern accessory dealer mailed out a souvenir recently to several hundred of his regular customers that were on his mailing list, consisting of what he termed a "Simplified Coat Hanger." hanger was inside a small envelope and on the outside of the envelope was this message:

"I just heard—"

Is Dangerous Propaganda

—and it's being used in connection with every worth-while business house in Denver—originating in the mind of some "business wreck" and then handed out in the regular gossip channels that "Mr. So-and-So" or "the firm of Doe & Co." are not going to be able to survive the Readjustment period, and at some certain time must close their doors for whatever reason may suit the mind of the "gossip"—

This should not be tolerated.

The Readjustment is not injuring the business of this city, but on the contrary putting it on a better and healthier basis, and we all feel safer than under the abnormal conditions we have passed thru. We are building up better sales organizations and offering to the public today better built products at greater values than at any time in the past three years.

Make a resolution now to stop these lies by not allowing them to be passed without proof, and we will soon find the public in general will not be carried away by false statements that go to injure every reliable business house regardless of its nature.

Remember—"Stop the Gossip!"—

And it won't be long until these reports are a thing of the past, because they are without foundation.

Change 133

Dan Hogan

Twelfth and Broadway

Cole Motor Cars Exclusively

Timely Advertising

You can build public confidence in your business and yourself by showing in your ads that you are abreast of the times. When financial lines drew tight last fall and the air was filled with "rumors," Dan Hogan, Cole dealer in Denver, used ads like this

The Accessory Merchandiser

Mail Order Firms Don't Faze This Dealer

A DEALER in a community where the mail order houses are liberally patronized by the farmers, knew that he must do something to counteract the mail order house advertising if he was to receive his just share of the farmers' accessory business. Instead of hammering away at the mail order houses through his advertising copy and sales letters, he hung out a large sign in front of the store: "Catalogue prices don't scare me—show me them and I will duplicate the order and save you the freight." His newspaper advertising carries the same message. The result is there are farmers bringing in their orders to him to see if he could duplicate the prices of the mail order houses. From the day the sign was hung out his business has increased and in a short time has reached a splendid volume.

Everything for the Motorist

THE R. J. Tooke, Ltd., Montreal, Que., not only featured accessories for the car, but the owner and his chauffeur were also taken into account. In the middle of the trim came a large cord automobile tire, over which a pair of black leather driving gauntlets were thrown. Placed on the floor directly below the tire was a full sized headlight, while behind this on a raised stand, was a large fur lap robe. Neatly arranged down in front were such articles of motor wearing apparel as chauffeur uniforms, ulsters, coats and

leggings, with an inner tube, klaxon, tail light and horn laid across the various articles.

How One Dealer Developed "Comfort" Accessory Sales

WITH gas, oil and tire cost gradually declining, there is increasing opportunity for the dealer to interest motorists in accessories of other than merely utilitarian nature. Edgar M. Thom, Cleveland accessory dealer, has prepared a chart showing the present savings in operating expenses on typical mileages of 100, 150 and 200 miles per week for small, medium and large size cars. When the owner sees the substantial reductions of his present transportation expenses noted in black and white, as compared with peak expenses of a year or two ago, it is easier to persuade him to put some of this "velvet" into "comfort," "appearance," or "distinction" accessories, according to Thom.

The Picture Story with a Moral

THE Rice Lewis Co., Toronto, devoted a display to non-skid chains. Chains were spread out on the floor, but where this trim differed from many was that the chains were arranged to spell out the name of this particular brand of non-skid chain. A note of warning to careless motorists was sounded at the back of the photograph of an automobile, which was completely wrecked through slipping on a wet road.

"Inside you will find a Simplified Coat Hanger, undoubtedly the most universally used coat hanger in the world. It is easy to attach whenever and wherever needed, and warranted for five years with ordinary usage."

Inside this little envelope was an ordinary, every-day, ten-penny nail.

The idea was so clever that people talked about it, and that was good advertising.

Tractor Dealer Sends Monthly Letters

YANCEY BROTHERS of Atlanta, Ga., handle tractors. They have a good sized mailing list and each month every person on that list receives a letter headed either "The Proof of the Pudding is in the Eating," or something expressing a similar meaning. In the body of the letter are given the names of several persons who have purchased a tractor from Yancey Brothers the past month, together with their address. The recipient of the letter is asked to write these people or telephone them about the tractor they purchased. In other words, "Ask the man who owns one." The idea is getting business for Yancey Brothers.

Proper Unloading Equipment Reduces Cost

WITH improved railway freight service decreasing or eliminating the need for long driveaways from the factory, the car dealer should invest in a good equipment of crowbars, chisels, portable twin jacks, soft soap, rope, bur-lap, and planks for quickly and safely freeing, rolling, sliding and pulling new machines from the freight cars. One Cleveland dealer has reduced labor expenses per car for this part of delivery from \$4.85 to \$2 by investing \$185 in such equipment. On this year's probable freight deliveries of 125 cars, this will mean a net saving of at least \$325, which is split evenly with customers. There is a considerable additional saving in lessened damage to cars compared with former methods of unloading largely by "main strength and awkwardness."

List of Owners Helped Sell Tires

A REAL personalized piece of advertising is being conducted by a tire dealer selling United States Tires. He has placed a large bulletin board in a conspicuous place in his show room. It is headed "Royal Cord Users," and below are listed the names of car owners who have purchased "Royal Cords" from his store. When a prospective buyer notices the names of several acquaintances on the board, he feels that neither his confidence in the dealer nor Royal Cords would be misplaced.

Editorial Observation

Are You Ready?

INDICATIONS are plain that a big season is under way in automotive equipment. The curtailment of car sales which began late last summer means that a higher than normal percentage of old cars will be kept in service. Owners will want to dress these cars up to keep them in good running condition and to make them look as near new as possible. They will buy both essential and ornamental accessories for this purpose, and the garageman or dealer with a well-selected accessory stock, well advertised, well displayed and well demonstrated, is assured of a good season's business.

The season's accessory sales will go to the merchants who have the stock that automobile and truck owners want and to those who merchandise their stocks. Just at this moment, with the season barely started, the immediate problem is to see that stocks are adequate. It is time to go over last season's sales records, note the best selling lines and see that stocks

in these lines are at least as large as they were a year ago, larger if the dealer is laying plans to push accessory sales beyond what he did last year. It is time to check up on current stock inventory records, noting the lines that show greatest life this season and making arrangements to replenish them, or enlarge them, if circumstances warrant it.

The accessory merchant needs to keep foremost in his mind the fact that almost 9,000,000 cars and trucks are registered in the United States—and most of them are running. Of secondary importance is the fact that sales of cars and trucks were slow during the past six to nine months.

The automobile or truck owner who stops at your accessory counter will not be interested in the fact that you have the biggest stock in town—if you happen to be out of the thing he wants.

You can sell only what you have. Are you ready for the selling season?

Clean Up!

THE impulse that prompts the purchase of a new spring suit is as old as history—it is just a case of man or woman keeping step with nature. It is the same impulse that stirs desire for a new car or new fittings for the old car, a desire that always is strongest when the growing season is just begun. When nature and man are sprucing up, and man, wishing to spruce up his automotive possessions, turns to the dealer or garageman, what does he expect to find? He will just naturally be shocked, won't he, if

he doesn't find his automotive man sprucing up along with nature and himself?

This ought to be clean-up time in the salesroom, service station and garage, as well as in field and home. The salesroom that is festooned with winter's cobwebs, the repairshop that is smudged with the dirt of the shut-in season is more likely to squelch than to foster the spruce-up attitude of the would-be patron. It is time to clean up and paint up.

Let us get busy NOW.

The Ancient History Vendor

THE plainly marked upturn in business has left the calamity-howlers with a scant audience, but the other day we had to listen to one of those pests who declared that, while things were a little better just now, they would be a lot worse before they got back to normal. Just where the cheerful gentleman got his information we don't know, but if he comes around your diggin's with a dose of his confi-

dential poison gas just announce that you have had later and more confidential information to the effect that things are improving rapidly, and you, for one, are going to have a whale of a year. Then tell him his pessimism is ancient history and you have no time to listen to it—and give him the laugh. That will just about finish him in your place and in the place of everybody else.

LETTERS *from* READERS

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

This Dealer Is Selling, Too

Editor Motor World: In your March 2 issue of Motor World I noticed that the Brownell Auto Co. of Binghamton had established a record for car sales in this section. While this company does not wish to dispute any records nor seem presumptuous in the matter of sales ability, I would like to set forth the following facts for consideration: during the first six working days of this month this company has sold six used cars and one new one, all cars being sold at a fair price without any special sale nor sacrifice of price. On November 6 of last year we sold eleven cars, used and new. These sales were brought about with only two salesmen, myself being one of these.—C. V. Rainey Auto Co.

—And So Is This One

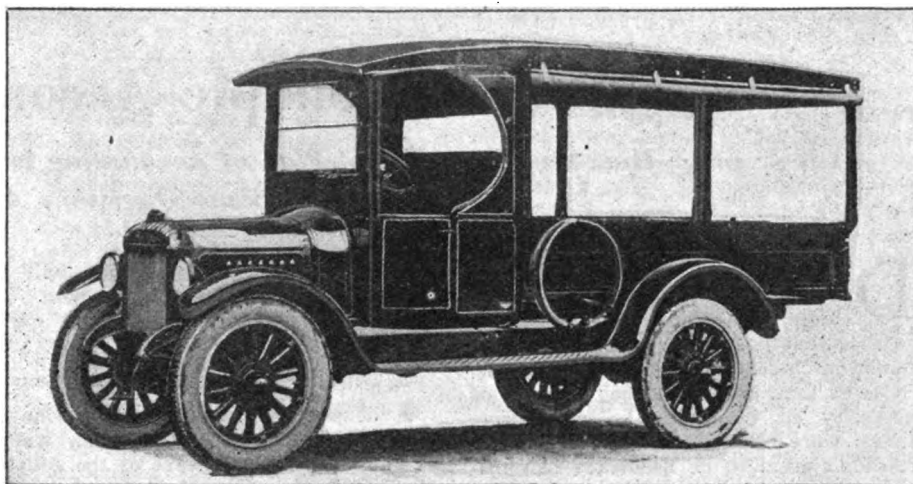
Editor Motor World: I am just in receipt of the March 2 copy of Motor World and notice on page thirty-five where seven salesmen sell seven cars in seven days, and notice that the article states that dealers in that section are inclined to believe that this is the record.

I believe that we can go a little better than that in stating that on February 2, 1920, two salesmen sold thirty cars in thirty minutes and during the balance of the day sold twenty-four, making a total of fifty-four cars in one day.

We have been told by representatives of the Ford Motor Co. that this is a record for a dealer having a territory composed of thirty thousand population.—E. R. Bagby, Bowling Green, Ky.



Extreme lightness is the feature of the new Moller car, the chassis weighing but 800 lb. It has a 4-cylinder, 2 3/4 x 4 in. engine, disk clutch, 3-speed gear-set, Bosch magneto ignition and starting-lighting, and semi-elliptic springs underslung front and rear. The wheelbase is 100 in. and the tires 27 x 3 3/4 in. The chassis price is \$1,500. This car is manufactured by the Moller Motor Co., Lewistown, Pa.



Republic Model 10 Express

This is the latest addition to the Republic line of trucks and is specially designed for city and interurban service at high speeds, being fitted with 35 x 5 pneumatics both front and rear. The engine is a Continental Red Seal, the rear axle a Torbensen internal gear, lighting by Delco system and ignition by Bosch high tension magneto. The cut shows the canopy top body, but an open express model can also be had

Likes Selden Contract

Editor Motor World: You certainly are doing the dealers a million dollar favor by taking up this dealer contract proposition as we sure need a little more consideration and co-operation in these contracts.

The Selden form of contract is the fairest of any I ever saw. I don't think any dealer could ask for a fairer show than they give you.—Wisconsin reader.

The Dealer's Contract

Here's a dealer who "nominates" the N. A. D. A. as leaders to "speak out" concerning contracts.

Editor Motor World: We compliment you on your article, "The Dealer's Contract," which appeared in Jan. 19 issue.

You have certainly spoken. The majority of the manufacturer's contracts to the dealers is absolutely worthless to the dealer. Why do the manufacturers of automobiles call these long, meaninglessly worded folds of paper "contracts"? Why don't they give the dealer as much as he gives them in the way of a contract? What would a dealer's banker say if the dealer wanted a few thousand dollars and explained that he had a contract with such and such an automobile manufacturer? The banker would join in with Goldberg and say, "Well, that contract doesn't mean anything."

The dealers all over the country are in full accord with your article, we believe, and, while you are right when you state that they have been afraid to speak out, however, the time is now upon them when they are not afraid any more, and all they need is a leader. We nominate the N. A. D. A. as leader and urge that they go to it with gloves off.—North Carolina Dealer.

Repairs. Assume that this dealer sells two makes of cars, and that he desires to have individual records concerning each.

The forms provide but a single column for car sales, part and accessory sales, and repairs, and the same for expense items. This gives total figures for sales and expenses of each department. But individual figures covering the sales and expense for each car, the parts for each car, the repairs for each car, and tire vulcanizing, are desired. These can be easily obtained by arranging the sales slips of each department in these divisions, and totalling them, or by distributing the sales entries in the various columns under these heads. The same is true for expenses. If any of the departments provided for are not operated, the column for it is left blank, or may be used for another department by writing in a new heading with the pen.

Here is a dealer, who has recently installed a Motor World Simplified Accounting System. He asks the following questions:

1—I buy 10 cars from the Blank Motor Co. for \$10,000 cash and a 6 months' note for \$2000 bearing interest at 6 per cent. How should I make the entries?

2—How should I enter the demonstrator expense? Suppose I have charges of \$60 for salary, \$4.90 for repairs, and \$3.60 for gasoline, to put on the books.

3—How shall I provide for the cost of free service under the guaranty which I must perform on the cars I sell?

4—One of my salesmen sells a car for \$1500 cash, for which he receives a commission of 3 per cent. He does not collect his commission until the end of the month. How should I show that I owe this money?

Answer—1—Inasmuch as you give your note for all of the money you owe the Blank Motor Co. which you do not pay in cash, and they can obtain cash for it by discounting it at the bank, they are considered as paid in full. They are charged with \$12,000 under Accounts

Paid Cff. The credit entries are \$10,000 in the Cash Paid column, and an entry of \$2000 against the Notes Payable account in the column headed All Other Accounts. These entries are all made on Form 2.

2—The demonstrator is maintained as

Could This Happen to You?

In the Northwest last summer some automotive dealers and garagemen let farmer customers run up long accounts for merchandise and repair work. Some of them even put their customers off when they came in to pay their bills, telling these customers to wait until things weren't so busy.

Along came the tumble in farm produce prices. The farmers held their crops instead of turning them into cash.

And the dealers and garagemen who were too busy to collect last summer are still waiting for their pay!

Has this ever happened to you?
Could it happen to you now?

Have you an accounting system? If not, write to Motor World and ask how you can install a simple system.

Is there something about your accounting system that is giving you trouble? If so, write to Motor World and ask us to help you straighten it out.

Is there some point in your sales or shop system that needs smoothing out? If so, write to Motor World and ask for help.

This System in Business Department is your department. Can it help you in any way?

an assistance to car sales, and this department should bear the expense of its operation. The \$60 wages is credited to Cash Paid, and charged to the Car Sales Expense account. This entry is made on Form 2, line 2. The entries for repairs

and gasoline are made on Form 1 because they represent sales by one department to another. This transaction is shown on line 1.

3—Some cars sold will perhaps need no free service, others require considerable. The way to take care of this contingency is to estimate the average cost of rendering free service, and to set this sum aside for each car sold. If this is not done, the profits will appear to be larger than they are because the discount allowed by the manufacturer covers a certain amount of free service. Suppose the estimated free service cost per car sold is \$25, and two cars are sold during the month. Then \$50 should be set aside to cover the cost of free service which will be rendered later. Later a car comes in for free service. It has a broken connecting rod, the cost of which is \$5. The manufacturer will replace this part, but meanwhile it must be taken out of stock. The labor charge for replacing the connecting rod is assumed to be \$15.

The entries covering the provision of a reserve to meet free service charges are shown on Form 2, line 3. On Form 1, line 2, Repairs and Parts show sales of \$15 and \$5 respectively. The manufacturer is charged with \$5 pending the receipt of his remittance or a new part, and the Reserve for Free Service is also charged with \$15 to pay the Service Department its charge for labor.

4—The commission on the sale of the car amounts to \$45. The entries are shown on Form 2, line 4.

The fixed assets consist of the building and its equipment, assuming that the building is owned and not rented. Both are subject to depreciation due to normal wear. That is both the building and its equipment have a certain useful life, at the end of which they will have to be replaced. Each year of use represents a certain loss of value, and this loss is part of the expense of doing business.

The rate of depreciation is very variable as it depends on a great many factors. Depreciation on buildings is, as a rule, much less than on machinery used in the shop. It is impossible to make anything more than an estimate of what the life of any unit will be, and for this reason some uncertainty is caused as to what depreciation should be charged.

Depreciation on fireproof steel buildings and reinforced concrete buildings is charged at 1 per cent on buildings that are five years old or less, and 2 per cent on buildings more than five years old. On masonry construction buildings and fireproof apartment buildings, depreciation is figured at 2 per cent during the first five years, and at 3 per cent thereafter. For brick and lath buildings the rate is from 3 to 4 per cent, and on old frame and nearly obsolete buildings the charge runs from 5 per cent up.

Where the books show the value of elevators and machinery separately, the depreciation should be charged on these at 10 per cent per year. On shop machinery which is subject to very heavy use a rate as high as 20 per cent may have to be used.

Accounting System of Motor World

FORM 1										CASH RECEIPTS AND SALES RECORD										DATE	
INCOME ACCOUNTS										CUSTOMER'S ACCOUNTS PAID											
BALANCE FORWARD	SALES TAX	REBATE	SALES TAX	PAID ACCT	SALES TAX	STORAGE	CAR SALES	EXPLANATION	DEBIT	CREDIT	DATE	NAME	DEBIT	CREDIT							
1	380.10	107	490.37					Car Sales - Remittance													
2			15.00	372		500.194		See above Car 18724													
3																					
4																					
5																					
6							1750.00	70 Yellow Cars													

FORM 2		CASH PAID AND EXPENSE RECORD										DATE	
DEBITS		CREDITS											
EXPENSE ACCOUNTS		PAYABLE TO JOBBERS WMP & OTHERS											
AMOUNT PAID	DATE	ACCOUNT	ALL OTHER ACCOUNTS	JOBBERS WMP & OTHER ACCOUNTS PAID OFF	CHECK NO.	ALL OTHER PAID	ALL OTHER ACCOUNTS PAID	JOBBERS WMP & OTHERS	TO NUMBER PAID OR NAME OF ACCOUNT				
1													
2		60.00	Unemployment Exp		120000	120000.00	120000.00		Wm. Payable				
3		50.00	Reserve for Indemnity				60.00		Wages				
4		55.00	Accrued Comm				50.00		Reserve for Indemnity				
5			Unemployment Exp	100.00		100.00	55.00		Money from General Comm				
			Unaccounted						First National Bank				

columns are used for the sales of the various departments, which facilitates expenses. It is primarily a purchase journal with individual columns for of each department

A Department of BETTER MECHANICS

Conducted by J. HOWARD PILE

No. 185

When asking for information, please state whether you maintain a permanent file of Motor World, as many inquiries are answered by reference to previous issues

Repairshop Requirements for Drill Presses

*Types of Presses Suitable for Automobile Repair Work
—Accessories That Are Needed*

DRILL presses for the repair shop doing automobile work are essentially of the job type and not of the production type. Production type presses, or those used in manufacturing and special machines in many cases are not at all suitable to repair work. Gang drills and radial drills might be mentioned as among those for which no use can be found in repairing.

Before going into details of the various kinds of drills for which there is a real need, it might be well to talk of drill presses in general. Regardless of the size of the shop or the number of machines operated, it will be found that the individually operated motor driven machines are an economy, in spite of the

fact that their original cost is somewhat higher. The cost of running an engine or a large motor idle or under a partial load a good deal of the time will rapidly wipe out the first cost of the machine. Another advantage of the motor driven machine is that a rearrangement of the shop machinery can be carried out by merely moving the wiring, whereas the moving of machinery where a line shaft and belting are employed means, perhaps, tearing down or altering the entire overhead work in the building.

Of course, if electric current is not available, the engine and line shaft will have to be used.

Specifications of drill presses include the swing and the capacity. The swing

is twice the distance from the center of the drill spindle to the nearest point of the machine frame, which would prevent the use of the machine on larger work. A press with a table 20 in. in diameter will usually have a swing of 2 or 3 in. more than this. Other important specifications are the size or number of the taper in the shank, the vertical travel of the drill spindle, the capacity or largest size drill that the press is designed to take, and the type of table.

Spindle Drills

These include really all kinds of drill presses in which the drill spindle is fixed as to position, and the table allows the work to be clamped down or moved about. A medium duty spindle drill is the best all around machine for the shop, and allows an infinite variety of work. The best kind of table is one that swings around the central post of the press, and the table itself revolves on another small spindle. This combination of motions allows work that is clamped down on the table to be swung so that the desired point will come directly under the drill point. The two motions are shown diagrammatically in Fig. 2. The dotted lines represent the circles that the two parts swing in. When the desired position is reached the two parts are clamped in place, thus holding the work true.

The drill press should be bolted down to the floor securely. If possible, through bolts should go through joists in a wooden floor, and in the case of a concrete floor bolts can be bedded in the concrete or expansion bolts can be used.

Light Spindle Drills

In principle, these are the same as the ones described previously, but the parts are lighter, the capacity of the machine is much smaller, usually not over $\frac{1}{2}$ in., and the speed of the spindle

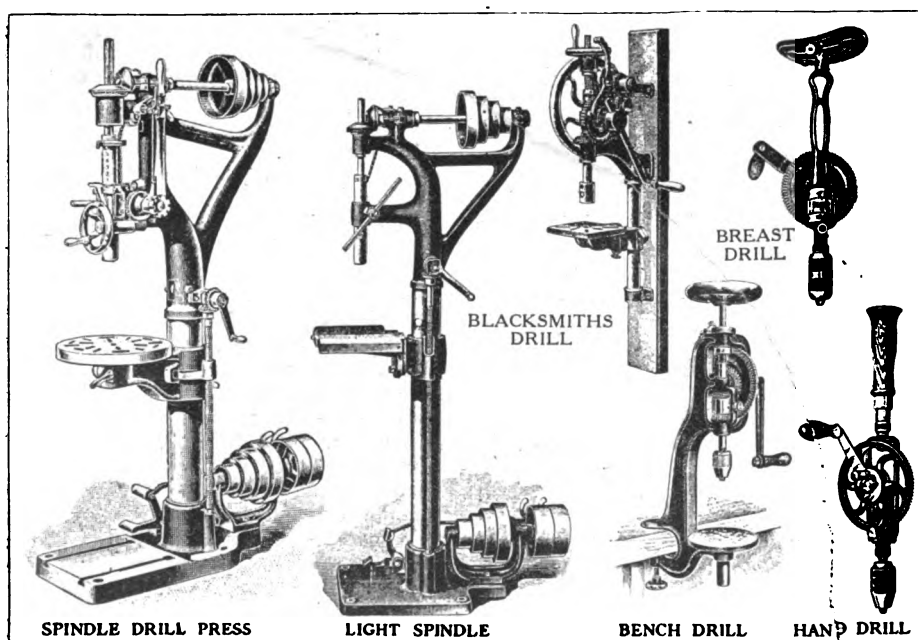
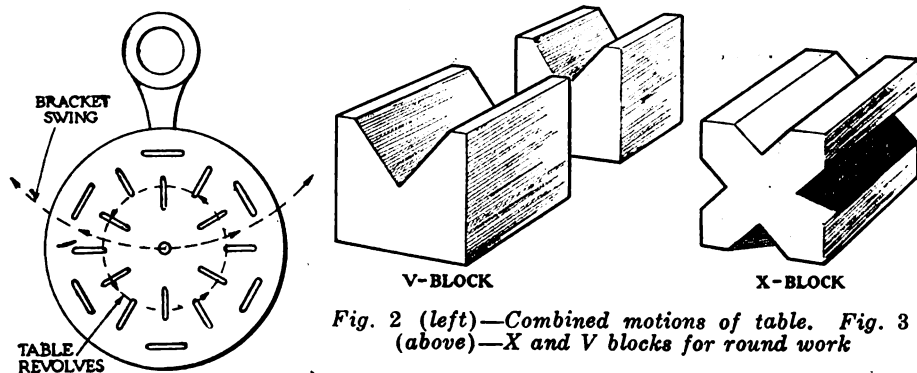


Fig. 1—Types of drill presses suitable for the automobile repair shop



is very much greater. The light spindle drill is used for such work as drilling centers in work to be swung in a lathe, small holes in light pieces of metal, etc. The table is movable vertically and revolves on a pivot, but usually the table does not swing, as in the case of the heavier model. No provision is made for bolting through the table, there being no slots, except in special cases. Light spindle drills can be provided with additional equipment, as shown in Fig. 5. The center is used for work that already has one center; the crotch for holding rods, shafts or pipe and the small pad for work of peculiar shape that will not very well fit on the larger table.

Blacksmith's Drill

The blacksmith's drill is for use in a shop where power is not available at all or for a portion of the time only. Such drill presses are attached to the wall and are ordinarily driven with a hand crank. Pulleys are attached, if desired, for driving from a line shaft. Some of the models have an automatic feed which can be regulated according to the kind of metal being drilled and the size of the drill used. Blacksmith's drills usually have a special kind of chuck and are not ordinarily fitted with Morse tapers.

Small Drills

Some drills, which do not really deserve the name of drill presses, but which have their uses around the shop are bench drills, breast drills and hand drills. The bench drill is attached to the edge of the bench with a screw clamp and is operated by a hand lever. It is sometimes provided with two speeds and the table is adjustable and can be turned. The breast drill usually has two speeds and both the breast plate and the side handle are removable so that the drill can be worked into difficult places. The hand drill is for very tiny drills which might snap off under the weight and leverage exerted by the larger type drills. Such operations as drilling out carburetor jets are best done with this kind of a tool.

Chucks

On the smaller drills such as breast, hand and bench, the chucks are threaded onto the shank of the drill. On spindle drills, there is a Morse taper in the shank of the drill press. Large drills with a Morse taper shank will fit into

the opening either directly, or by means of a reducing socket from one size to the other. For small drills, a chuck is used, the drills themselves being straight shank. There is a great variety of different kinds and makes of chucks on the market, most of these operating by drawing in the tapered jaws with a tapered

Cylinder Regrinding and Reboring Tools and Outfits

April 20, 1921.

ORIGINALLY scheduled for the issue of April 27, this installment of the tool and machine tool series will be moved a week ahead on account of the SUMMER MERCHANDISING ISSUE.

This section will take up the classification of types and field of usefulness of each, shop methods, cutter adjustments, list of sizes and other information of interest to the shop owner or manager.

collar which is knurled on the outside or else provided with a key. The chucks for spindle drills are provided with a suitable taper to fit the drill press.

Holding the Work

Fig. 3 shows two types of blocks used for supporting round and irregular shaped work on the table of the drill press. The blocks go in pairs and the drill point is usually between the blocks so that when the drill comes through the work it will not damage the blocks.

Larger work can be clamped down to the table as shown in Fig. 4. In the illustration, the bottom of the work is flat, but should it be turned up the other

way, the work can be blocked with square or oblong pieces of metal. An essential precaution is to have the clamp bolt as near the work as possible and to have the clamp blocking out as far as possible. This will give the greatest leverage.

For very large work, that will not go on the table, the table can be swung out of the way and the work supported on the base or table plate or directly on the floor if the press is well secured to the floor.

A planer vise is sometimes very convenient. This has a flat base which can be set down on the table, or if necessary it can be bolted down with clamps or bolts.

Care and Operation

Care will greatly lengthen the life of a drill press and will also enable it to do more accurate work. The drill should never be run down into the table, as this will eventually result in a table surface so uneven that no true work can be done on it. Several old slabs of cast iron laid on the table will prevent this and when they are pretty well drilled up they can be replaced at very slight cost.

The press should be cleaned and well oiled every week. Clean out all chips and drillings and wipe the press all over with an oily rag. If of the pulley or belt driven type, the bearings of the loose pulley and the shaft should be oiled twice a week. The belts should be kept at the right tension so that they will not slip, but should not be too tight so as to cause undue wear on the bearings and breakage of the belt.

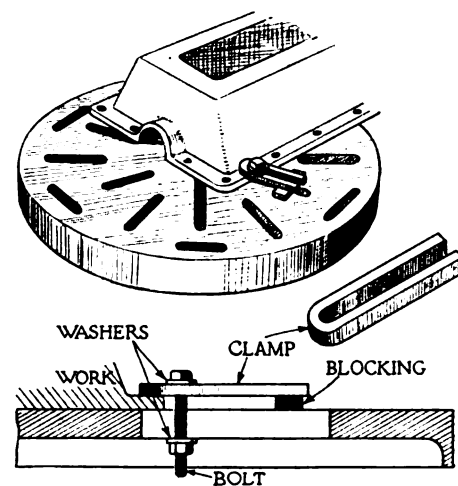


Fig. 4—Method of clamping work to the table

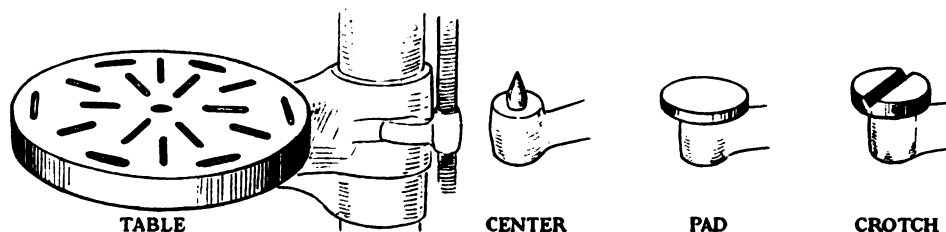


Fig. 5—The center, pad and crotch may replace the table for certain kinds of work

THE LAW

By GEORGE F. KAISER

Perplexed?

Does some point of law perplex you?

Why don't you ask MOTOR WORLD's legal editor to discuss the question?

Maker Entitled to Bill of Particulars

That in an action against a motor car manufacturer, for injuries claimed to have been caused by defective parts in the car, the manufacturer is entitled to have a bill of particulars, giving full information as to the speed of the car and the way the brakes were used at the time of the accident, was the decision in a late New York case.

The claim was that the manufacturer was negligent in failing to properly test the parts put in the automobile and that it was carelessly manufactured, "in that the parts connecting one of the steering arms of said automobile were worn and of insufficient size, and the defendant was negligent, in that a spring, which was a necessary part of said steering apparatus and steering arm, was not placed therein, making such steering apparatus unsuitable and unsafe, liable to become useless and to break, and said defect was not visible to open or casual inspection by the plaintiff."

The court further held the manufacturer was entitled to particulars of the parts claimed to be defective and the spring claimed to be missing as well as particulars of the accident although it might not be entitled to know the hour of the accident or the details of the injured party's experience as a driver.—186 New York Sup. pg. 331.

Garageman's Lien First in Wisconsin

Editor Motor World: Whose lien comes first in this state? Does the lien for repairs come before a lien for the purchase price? We have a case like this on hand now and don't know what to do. We sold the car in this case.—B. D. Co., Kansas City, Mo.

Answer:—The Supreme Court of Wisconsin has just decided that a garageman's lien comes before a chattel mortgage given as a part of the purchase price of the car.

The Wisconsin law provides:

Every mechanic who shall make, alter or repair any article of personal property at the request of the owner or the legal possessor of such property shall have a lien thereon for his just and reasonable charges therefor, and may retain possession of such property until such charges are paid.—Stat. 1915, Sec. 3343.

Suit was started to get back a car by a dealer to whom \$50 was still due under a purchase money mortgage. The car was in the possession of a garageman who had made repairs on it at the request of the owner, and to whom there was \$162.10 due. The court held that the garageman's lien came first and that the dealer in order to seize the car would have to pay the garageman's bill first.—Smith Auto Co. vs. Kaestner, 159 N. W. 738.

Attaching Car for Injury Liability

Editor Motor World: In the event of a public liability claim for personal injury against the purchaser of a motor vehicle, carried on a regular lease agreement containing the clause, "Lessee agrees to indemnify and save harmless the lessor any loss or claim for loss or damage to persons caused by said motor vehicle, etc., etc.," and upon the inability of the lessee to cover said claim, does the liability attach to the holder of the lease? This is, of course, on the assumption that lessee has no public liability insurance protection.—J. A. Co., Johnstown, Pa.

Answer: Not that I know of. In some States, though, the rule is that a car can be attached for injuries inflicted by it, while in others mere ownership imposes liability. As I understand the Pennsylvania law, it is like the New York law, and an owner is only liable when the car is being used by himself or on his business.

Trucks as Security Subject to Lien

When motor trucks are pledged as security for a debt they may, nevertheless, be attached by a garageman under his claim of lien, in Massachusetts, was the decision of the Supreme Court of Massachusetts in the recently decided case of Tremont Trust Co. vs. Tucker, 129 N. E. pg. 357.

Mother Liable with Son

Where a mother represented herself to be the owner of an automobile with her son and helped him to sell it, she is bound by her silence and is equally liable with her son for false representations as to the car's freedom from encumbrances, because of her failure to contradict them. Karadimas vs. Angel, 194 Pac. pg. 775.

Jersey Ruling on Possession in Receivership

The New Jersey Court of Errors and Appeals, in the recent case of David Straus vs. Commercial Delivery Co. 112 Atlantic Rep. pg. 417, held that neither a finance company nor a firm which claimed certain motor trucks were entitled to recover them from the receiver of the owner company.

It appeared that when the receiver took charge of the insolvent company he found certain motor trucks in a garage belonging to it. These were claimed by both the finance company and another concern.

The finance company claimed the owner's rights had been assigned to it while it was still solvent and the other claimant contended the owner company had sold the trucks to it while it was still solvent.

The court, however, disallowed both claims, holding briefly the claimant was not entitled to possession of the truck, and further that the finance company was likewise not entitled to possession of the truck for the reason that the assignment was made as collateral security for the payment of a debt due from the owner and that the assignment was in legal effect only a chattel mortgage, and as such void as against the receiver, because it had not been recorded.

Where Note and Lease Figure in Sale

Editor Motor World: Will you kindly advise whether it is legal to accept a note from the purchaser of an automobile, providing you take a lease to cover the unpaid balance owing on a car? Would the note be considered payment, or could the car be secured by the dealer, providing he has a lease and payment is not made on the notes?—L. A. Co., Allentown, Pa.

Answer: By the word "lease" I suppose you mean conditional bill of sale. If you do, it is perfectly proper to accept a note—as the bill is given as security for payment of the note. I am handicapped, as I cannot examine the "lease form," nor ask you any questions. Down on your main street—where you have all the ornamental lampposts decorated with flowers in summer—you will find a good lawyer who will be glad to examine your form for you. I mean down near the monument.

Repairshop Shortcuts

No. 2880—Box for Tow Rope—To keep the tow rope or chain from dragging or getting in the way when not in use on the service car, a box is fastened under the rear end. A slot allows one end to come out so that that end can be permanently fastened to the service car.—W. B. Wheatley, Brooklyn, N. Y.

No. 2881—Puller for Ford Generator Bearing—The small bearing often stays in the end which holds the brush ring assembly and the tool illustrated will get in back of this bearing. The spike will prevent its turning when the nut is turned.—Lee F. Bussey, Louisville, Ky.

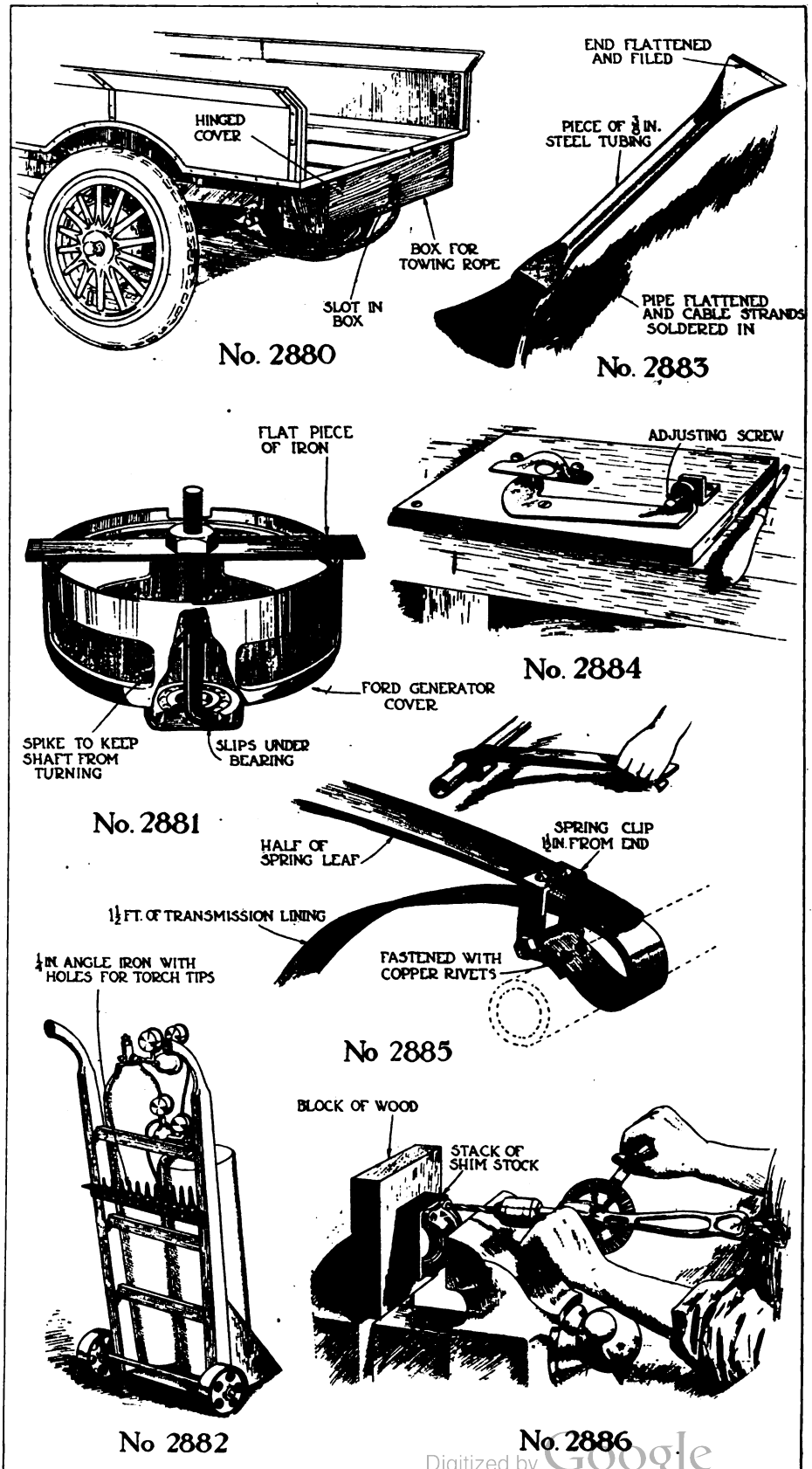
No. 2882—Complete Welding Outfit—In addition to the portable truck for the tanks, a rack for the tips or burners allows the whole outfit to be kept together and prevents losing the small tips. It is made of angle iron with holes drilled through the tips.—Hudson and Essex Service Station, Laconia, N. H.

No. 2883—Combined Scraper and Brush—The scraper is made by opening up and flattening one end of a piece of pipe or tubing. The brush is made by unstranding some wire cable, soldering the end into the tube.—Charles H. Willey, Concord, N. H.

No. 2884—Bearing Liner Vise—A vise to be fitted to the top of the bench for filing liners and shims is constructed of two thin pieces of metal bent as shown. The large piece works on a screw and the lug takes the thrust of the adjusting screw.—Charles H. Willey, Concord, N. H.

No. 2885—Grip for Turning Tubes and Rods—A grip which will turn tubes and rods without defacing them is made from a piece of spring leaf, a clip and a piece of transmission or brake lining, these parts assembled as shown. The loose end of the lining is held tight with the hand.—Nathaniel Thatcher, Doylestown, Pa.

No. 2886—Drilling Bearing Shims—Placing a number of shim blanks in a vise between a board and a bearing cap enables all shims to be drilled at once, all holes being exactly where they should be.—R. G. Dasse, Burlington, Vt.



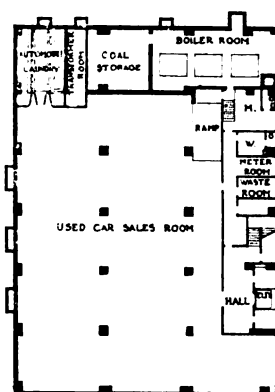
MAKE A DOLLAR

SEND in a sketch and a description of the device you dreamed out to make your work easier. Motor World will pay a dollar for every idea accepted for publication.

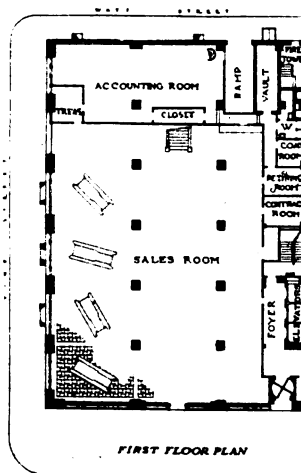
This Story Is About a Sales Building de Luxe

And How a Dealer Used Its Formal Opening to Build Up His Prospect List

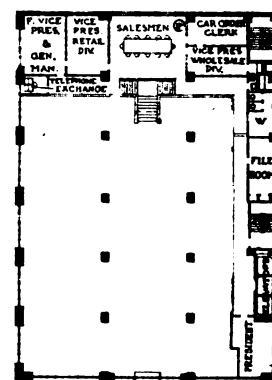
A NOVEL method of obtaining prospects out of a formal opening of a new dealer establishment was worked out recently by the Guy A. Willey Motor Car Co., Paige distributor in Philadelphia. A. E. Maltby, vice-president and general manager of the company, realized that the opening of such a palatial salesroom as that occupying the first floor of the Willey Building on Broad Street would inevitably attract large crowds. At the same time it was realized that the company would get only partial results from such a turn-out of visitors unless some means was worked out of obtaining their names. Accordingly, it was decided to give to a certain number of the visitors automobile tires and accessories from the automotive equipment display, which was staged as one of the features of the opening. In order to be eligible for the gifts, visitors were required to fill out registration blanks, giving their names, addresses, business connections, and the name of the car they owned, if any. These registration slips gave the company a large number of brand new pros-



BASEMENT PLAN



FIRST FLOOR PLAN



MEZZANINE PLAN

This is an example of careful planning that provides adequate facilities for the business without loss of space

pects and put new life into the sales organization.

In order to make the opening a success from attendance standpoint and to names, the Willey company arranged a

free moving picture exhibit of "The Elements of the Automobile," which was shown every day during the opening week. The moving picture exhibit was widely advertised in the newspapers and by the use of posters. In addition, insure the listing of a large number of the company also advertised the opening generally and sent out to a selected list of 7500 persons in Philadelphia and the vicinity, engraved invitations.

The automotive equipment exhibit, which was held in the used car salesrooms in the basement of the new building, was staged without expense to the Willey company; a dozen or fifteen accessory dealers of Philadelphia were invited to place goods on display. These goods were shown without advertising of the merchants handling them, but on a placard at one end of the exhibit room was a statement to this effect, "This exhibit was made possible through the co-operation of the following Philadelphia accessory dealers." After which followed the names of the firms exhibiting. A similar placard was placed in the main, or new, car salesroom.

The new salesroom, with its remarkably beautiful interior and fittings, the motion picture exhibit, and the accessory show combined, made up an attraction which won for the Willey company a lot of publicity and kept the

Window Card and Invitation That Made Formal Opening a Prospect Getter

A Free Moving Picture Exhibit of Interest

To Every Motorist

"The Elements of an Automobile"

A multi-reel feature film by the Bray Studios illustrating graphically the things every motorist should know about an automobile. Also reels showing Paige Car climbing the cog railroad up Pikes Peak and breaking the world's stock car speed record at Datona Beach.

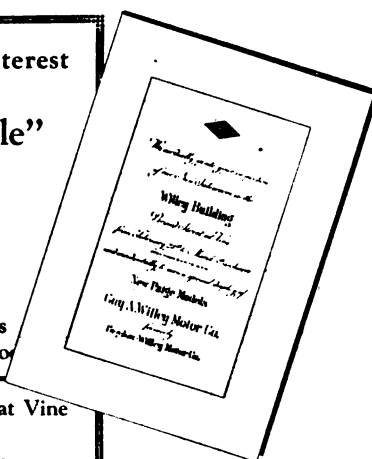
A Special Display of New Paige Models

A Wonderful Exhibit of Automobile Accessories
Formal Opening of the new Paige Salesroom

GUY A. WILLEY MOTOR COMPANY, Broad St. at Vine

Pictures Shown 2:30 P. M. and 8 P. M.

FEBRUARY 28th TO MARCH 5th, 1921, INCLUSIVE



This is the window card the Willey company used to advertise the "headline" attraction at its opening. The insert at the right shows the engraved invitation sent to 7500 persons

establishment filled throughout the entire opening week.

On the Saturday preceding the formal opening, the company held a good-will luncheon, at which were entertained 100 car and truck dealers and other members of the Philadelphia trade, following an inspection of the building.

The building itself is ten stories high, and is finished in cream white Indiana limestone. The first floor and basement

large show windows on both Broad and Vine Streets. To the rear are general offices, treasurer's office and a vault. Opening off the side are a contract room, rest room and coat room. Leading up from the rear of the showroom to the mezzanine floor is a marble staircase. The offices of the president, vice-presidents and general manager are located on the balcony. The telephone exchange, file room, salesmen's rooms,

The practice of providing an exclusive sales building is becoming quite common especially in the larger cities. It is important to have the salesroom centrally located, and this means that it is in the district of highest rents. The service department, however, does not suffer by being less prominently located, and it is consequently placed in a section of more conservative rents. In this way the overhead on service is reduced, which

Beauty and Character Were Combined in This Salesroom



Above—The view the prospect gets on entering the new showroom of the Guy A. Willey Motor Co. Cars are effectively displayed on either side of the broad center aisle leading to the staircase in the rear. Below, to the left, is a portion of the mezzanine. In the far corner are the offices of the general manager and of the vice-president in charge of retail sales. The salesmen's room is opposite the staircase. The accessory display on the right is located in an alcove in the showroom wall. Note how well this harmonizes with the general architectural scheme

are occupied by the Willey company, the upper stories being leased as offices. The showroom on the first floor is of exceptional beauty. The floor is laid out in a mosaic of Vermont slate. The walls are of Travertine stone, ornamented at pilaster caps and doorways. The lighting fixtures are of antique silver, and the showroom furniture is mahogany with blue upholstery.

The salesroom is 67 x 90 feet with

order clerk's office, coat rooms and lavatories. are also located here.

The used car salesroom is in the basement, and it is reached by a ramp from the back of the building. It is approximately the same size as the new car showroom on the first floor. An automobile laundry is located at the rear of this salesroom. The remainder of this floor is occupied by the equipment necessary to the operation of a building this size.

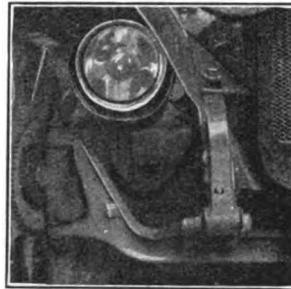
naturally results in lower costs to the owner.

The overhead expense on this salesroom is of course reduced by the rent from the offices on the upper floor, but dealers in increasing numbers are finding it profitable to provide suitable quarters for the display of their cars. A showroom of this character has a distinct and permanent advertising value to its owner.

Automotive Equipment

DIM BRIGHT INDIRECT LIGHT

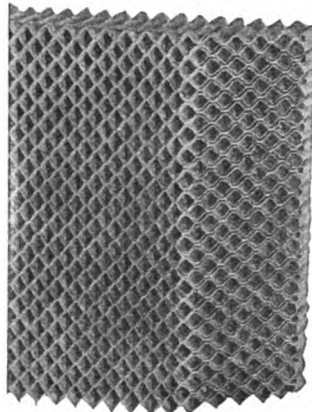
The light is located under the right fender. By placing it as high and as far to the rear as possible without interfering with turning, the fender acts as an effective shield. The lamp comes complete with brackets, and mud guard to protect the lamp in bad weather. The lamp attaches to the bracket with a single set screw. Whybrow Specialty Co., First National Bank Bldg., Whiting, Ind.



Dim Bright Indirect Light

PREMIER HONEYCOMB CORE

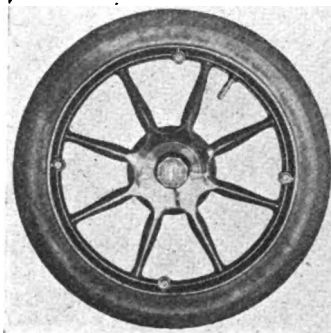
These cores are made up for all cars, trucks and tractors. Complete radiators using this core are also manufactured. The Ford model has brass tanks top and bottom, and the connections are made of malleable iron tinned for protection against rust. N. J. Lamp Works, 21 William Street, Newark, N. J.



Premier Honeycomb Core.

JEFFERSON DROP FORGED STEEL WHEEL

The hub, brake drum, spokes and felloe of this wheel are drop forged in one piece. The wheels are light, and tests are said to have shown that they are exceptionally strong. Prices, per set of four, are as follows: Ford—\$100, Chevrolet 490—\$115, Overland Four—\$115, Dort and Maxwell—\$125, wheels taking 32 x 4 tires, 12 in. brake drums—\$175, 14 in. brake drums—\$200. Jefferson Forge Products Co., Detroit.



Jefferson Drop Forged Steel Wheel

INSEL CELLULOID TAIL-LIGHT LENS

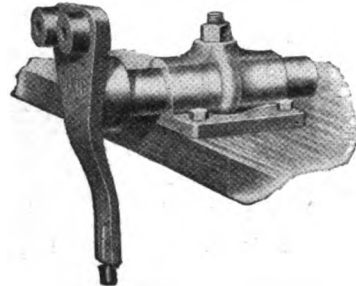
Made of celluloid, this lens is unbreakable, and easily installed. It is held in place without a spring retainer. It is made in a variety of colors and shapes. Price—15 cents. Insel Co., 250 South Street, Newark, N. J.

BULL DOG PUMP CONNECTION

A half turn of the lever on this connection compresses a rubber bushing, and secures the connection to the tire valve. It fits any tire valve and may be used on either wood or wire wheels. Price—35 cents. Apex Electric Mfg. Co., 1410 West Fifty-ninth Street, Chicago.



Bull Dog Pump Connection



Block Support for Ford Engines

BLOCK SUPPORT FOR FORD ENGINES

This device consists of a socket, which may be attached to a work-bench or other support, and a support arm which fits into it. The support arm is bolted to the engine by the exhaust water pipe bolts. The pin in the end of the support arm is slipped into the crankcase bolt holes and acts as a guide only. The spindle end of the arm is then slipped into its bearing box and bolted to the bench. Price, \$10.—Tuthill Sales Co., Kansas City, Mo.



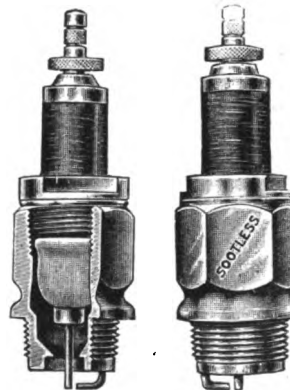
The Protex Signal

THE PROTEX SIGNAL

The operation of this signal is automatic. Pressure on the brake pedal lights a lamp in the signal which is mounted on the left rear fender. A brilliant light is secured by a reflector throwing the light through patented lenses forming the word "stop." Price—\$10.50. Protex Signal Co., Park Bldg., Cleveland, O.

HARTFORD BATTERY

This is a conventional lead storage battery. It has, however, a celluloid insulator which fits along the bottom edge of alternate plates. Models for all makes of cars and trucks are manufactured. Bulletin C describes the complete line. Hartford Battery Mfg. Co., Milldale, Conn.



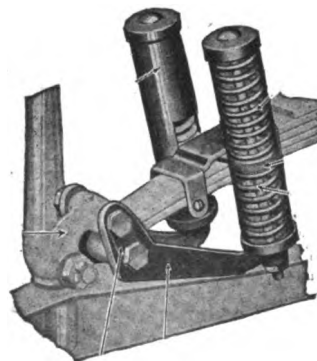
Sootless Spark Plugs

SOOTLESS SPARK PLUGS

The mica on the firing end of this plug is protected by a porcelain cap so arranged and enclosed that it is protected against breakage. These plugs are made in sizes to fit all cars, trucks and tractors.—Oakes & Dow Co., 307 Atlantic Avenue, Boston, Mass.

UNIVERSAL SHOCK ABSORBER FOR FORDS

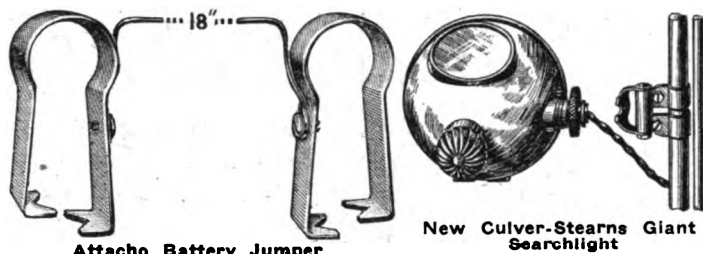
The springs in this absorber are enclosed for protection and appearance. Eight shackle bolts for installation are furnished with each set. The finish is black enamel baked on. Made in the following sizes: No. 1—for sedan and commercial bodies; No. 2—for touring and coupes; No. 3—for roadsters. They fit either front or rear springs. The illustration explains their application and operation. Universal Sales Co., 507 Odd Fellow Bldg., Indianapolis, Ind.



Universal Shock Absorber for Fords

ATTACHO BATTERY JUMPER

This device consists of two lead-coated clamps connected by 18 in. of lead-coated copper wire. It is intended primarily for use on batteries fitted with taper terminals. Prices range from 20 cents per jumper set in lots up to ten, down to 10 cents apiece for lots of 1000 or more. Mueller Electric Co., 2135 Fairmount Road, Cleveland, O.



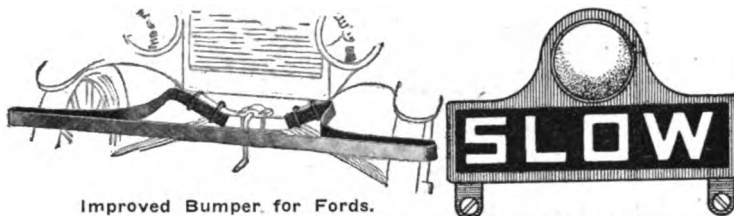
Attacho Battery Jumper

New Culver-Stearns Giant Searchlight

BONNEY BODY IRON ASSORTMENT

A complete set of body irons designed to aid the owner in making a slip-on truck body in a few hours. Instructions for the construction of a body for a Ford runabout are enclosed with each set, and the dimensions can be modified for any other car. Price—\$6 east of Mississippi, \$6.50 west of Mississippi. Bonney Forge & Tool Works, Allentown, Pa.

Bonney Body Iron Assortment



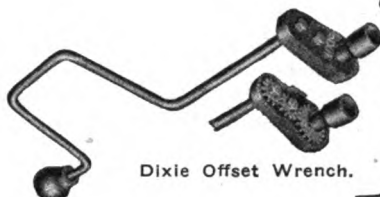
Improved Bumper for Fords.

Automatic Safety Signal.

IMPROVED BUMPER FOR FORDS

The Improved Bumper for Ford cars is made in one piece, and attached to the frame by two front spring clips. The finish is black enamel, but by means of the rustproof "Simmons Silver Strip," which fits on the front of the bar, the bumper can be converted into a nickel finish. This is a valuable feature in the case of a damaged bumper. Price—\$10. Improved Motor Accessories, 1100 Saint Clair Avenue, Cleveland.

Johnson Electric Buffer.



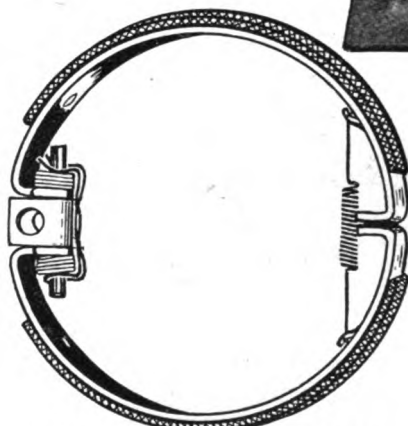
Dixie Offset Wrench.

DIXIE OFFSET WRENCH

This tool is designed to simplify the job of removing the nuts on the fourth connecting rod on the Ford. The wrench has a gear ratio of 12 to 13, which amounts to a 24-in. leverage. The tool is especially adapted to Ford crankshaft bearing work. Price, \$4.—Tutthill Sales Co., Kansas City, Mo.

J. O. M. ADJUSTABLE BRAKE SHOE

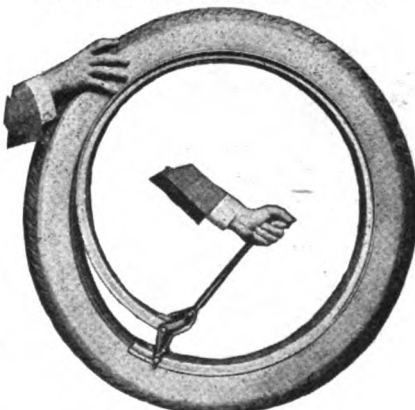
This is an adjustable, asbestos lined brake shoe for Ford cars. It is made of cold rolled steel and the lining is brass wired asbestos. Wear is taken care of by means of washers which take up the slack. These shoes will fit any Ford, from 1908 on. Price \$3.50 per pair.—The James Bailey Co., Portland, Me., Distributors.



J. O. M. Adjustable Brake Shoe

MILLER MINUTE TIRE REMOVER

This tool consists of a single piece with a detachable handle of malleable iron. It operates any make of split rim, and is said to work as well on a sprung rim as on a new one. In order to use it on a rim for the first time, four properly spaced holes must be punched in the rim. Prices, No. 101, 3 1/2 to 4 in. rims



Miller Minute Tire Remover

—\$3.50; No. 102, 34 to 36 x 4 1/2 or 5 in. rims—\$3.75; No. 104, 32 x 4 1/2 in. rims—\$4. Miller Bros., Inc., 910 First National Bank Bldg., Chicago.

NEW CULVER-STEARN'S GIANT SEARCHLIGHT.

Embodied in this searchlight is a separable bracket, which may be loosened by hand, thus enabling the user to insert an extension cord 10 ft. long, and utilize the searchlight for illumination around the car. This change does not interfere with use of the searchlight for the use for which it was originally designed. Price, complete with extension cord—\$9.50. J. H. Faw, Inc., Distributors, 37 Warren Street, New York City.

AUTOMATIC SAFETY SIGNAL

This is a combination tail light, and safety signal. It is constructed of aluminum, and is attractively finished. It is operated by pushing the brake or clutch pedal, the word SLOW being flashed in red letters. Price—\$15. International Aerial Navigation Co., St. Louis.

JOHNSON ELECTRIC BUFFER

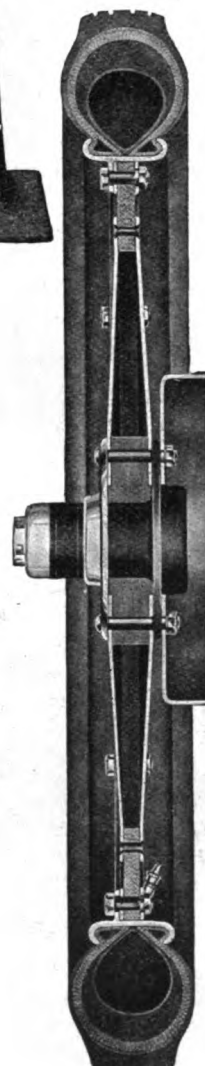
This buffer is built in a variety of sizes for either two or three phase alternating current. The most popular size has a 5 hp. motor and operates at 3600 r.p.m. The long extension shafts make it possible for two men to work on the machine without interference. These shafts are mounted in ball bearings at both ends. U. S. Electrical Mfg. Co., Central Avenue at Third, Los Angeles, Cal.

POVASCO STEERING WHEEL

Two new steering wheels have been added to the Povasco line. Both are made for Fords, and one is called the Ford tilt, while the other consists of a polished aluminum-spider wheel. The Ford tilt can be swung out of position, thus enabling the driver to get in and out of the driving seat more readily. The aluminum-spider wheel has a mahogany rim and sells for \$6.—Pouvassmith Corp., Poughkeepsie, N. Y.

HALL FLEXIBLE WHEEL

This wheel is furnished with demountable rims for either straight side or clincher tires. It is applied to any car without changing the hub or using extra parts. The wheel is made of two steel disks, and a 1/4 in. thickness of vulcanized fabric held between steel rings on the outer edge, and the steel disks on the inner edge. The wheel is made in 30, 32 and 34 in. sizes. Hall Syndicate, Inc., 1730 Glenwood Avenue, Philadelphia, Pa.



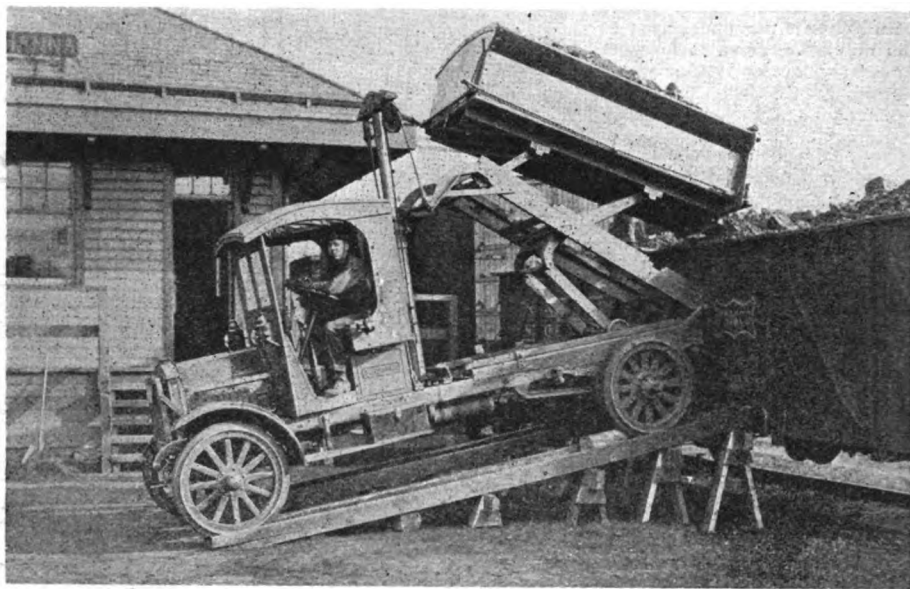
Hall Flexible Wheel

New Elevating Dump Body for Federals

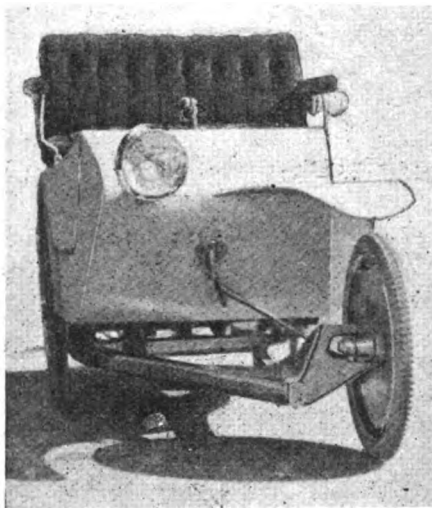
Priced at \$1250 and Designated as Body D-10

THE Federal Motor Truck Co. has brought out a new type of elevating dump body operated by a standard hydraulic hoist. The body has two positions, the elevated position, which raises the lower end of the body 6 ft. above the ground, and the ordinary dumping position. The body is of the ordinary type with a flat sliding chute door in the tailgate and carrying the 18 ft. telescoping chute in a cable under the body. The elevating mechanism consists of a number of parts. The frame extension extends above the chassis frame, and not only strengthens the frame but also carries the shafts, brakes, etc. The elevating frame is pivoted at the rear and carries the elevating arm at the front and the main elevating lever at the center. It is elevated in the same way as an ordinary dump body. The main elevating lever is pivoted at the center of the elevating frame and the lower end is anchored to the frame by pull rods, the upper end elevating the body. In addition to these parts, there are pull rods, release hooks, shaft and end lever.

To operate the body in the elevating dump position, the body is raised by the hydraulic hoist which is controlled from the driver's seat in the usual way. The release hooks are engaged. To elevate the body to an ordinary dumping position, the release hook lever is thrown toward the rear and this releases the pull rods, the body raising on the elevating frame on the front end only. It is possible to dump across a sidewalk or into a doorway above the walk. Two or three smaller trucks can be used for loading a larger one. The total weight of the new body is 2950 lbs. and the price is \$1250. The body is designated as D-10.



The new Federal dumping body is hydraulically operated and is controlled from the driver's seat



The Scootamobile

A TWO-PASSENGER automobile, shown at the left of this item, has been developed by C. H. Martin, of the Martin Rocking Fifth Wheel Co., Springfield, Mass. It is said to be capable of 30 m.p.h., weighs less than 150 lb. and travels 75 miles per gallon of gasoline.

New Cyclone Truck Made in Dixie

THE Cyclone, rated at 1½ tons and selling for \$2,800, is an assembled product. It is manufactured primarily for distribution in the South. The engine has cylinder dimensions of 3½ x 5 in. and it develops 35 h.p. at 1800 r.p.m. The clutch is a multiple dry disk, and the gearset provides three speeds forward. Starting-lighting and battery ignition are standard equipment. Final drive is through internal gears. Discwood wheels are standard equipment, which is a departure from conventional practice. Standard equipment includes spare rim, pump, electric lamps, electric horn, tools, jack, tire repair kit, bumper, front fenders, runningboards, cab and Alemite lubrication. Specifications are as follows:

Price—\$2,800.

Capacity—1½ tons.

Engine—Herschell-Spillman, 3½ x 5 in.

Electrical system—Westinghouse.

Gearset—Warner.

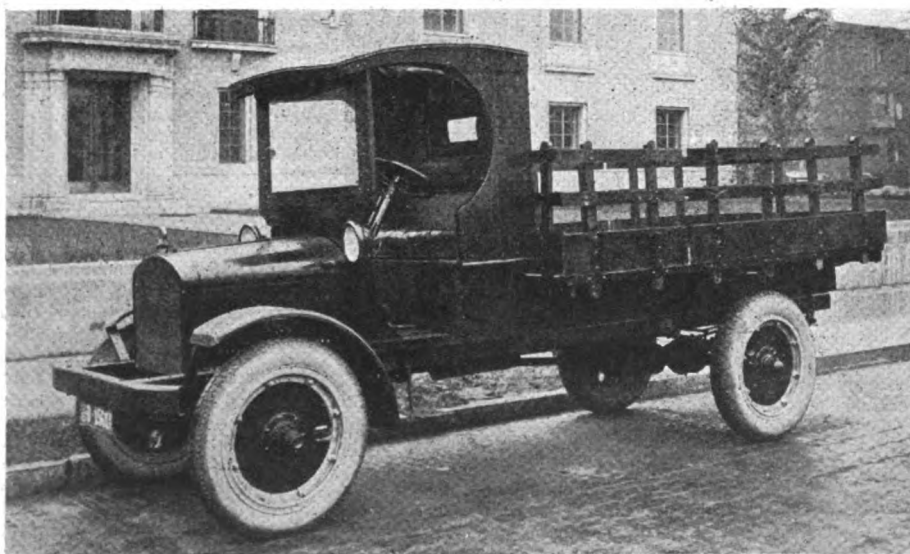
Rear axle—Torbenen internal gear.

Springs—Semi-elliptic.

Tires—Pneumatic, 34 x 5 in. front, 36 x 6 in. rear.

Wheelbase—136 in.

Manufacturer—Cyclone Starter & Truck Co., Greenville, S.C.



The Cyclone 1½-ton truck has Discwood wheels fitted with cord tires

Watch Your Legislature

*Eternal Vigil and Prompt Association Effort Must Be Used
to Protect the Industry from the Burden of Heavy
Revenue-Raising Legislation*

AN instance of the necessity of a continual alertness on the part of the automotive industry is offered in the attempt of Connecticut legislators to put a tax of \$450 a year on 5-ton trucks—practically ruling them off the road—and to add materially to the assessment burdens of automobile owners. The Connecticut trade was alert, however, and it is probable that the measures will be defeated or at least modified to a point somewhere near the demands of dealers and manufacturers.

A storm of protest greeted the committee on roads, rivers and bridges at a hearing at Hartford on proposed increase in motor vehicle taxation. The House of Representatives, where the meeting was held, was crowded with protesting legislators representing outraged constituents, truck owners, drivers, dealers and passenger car owners. State Highway Commissioner Charles J. Bennett defended his plan of taxing motor vehicles far in excess of the present rate as a means of raising needed revenue for road betterment and building. In a nutshell, the commissioner's idea is just about this: Since motor truck and passenger car owners use the roads and help to wear them out, let the owners foot the bills. Now, the owners do not propose to do any such thing. This was evident at the hearing this week.

The greatest storm of protest came from the proposition to increase the registration of a 5-ton truck from \$75 to \$450, and lighter trucks correspondingly. Even the truck manufacturers had a word to say through counsel on this phase of the situation. It was freely expressed that such an exorbitant fee, wholly out of reason, would tend to discourage the sale of trucks, make long credits impossible and inflict such a hardship that the 5-tonner would disappear from the road. Commissioner Bennett held otherwise, pointing out that the increased cost of operation for a 5-tonner would be but \$1.70 per day, allowing 250 working days to the year. The commissioner further pointed out that the cost of other items has been reduced, as, for instance, gasoline, therefore the increased taxation, though it represents a high percentage advance, would not drive the large trucks off the road.

Members of the legislature, and especially those from the manufacturing sections in the south end of the State,

were indignant and voiced for their constituents the loudest kind of protest. One member pointed out that a manufacturing concern used its 5-ton trucks for short hauls between its plant, the railroad terminals and the steamboat docks, never left the city streets, and

Concerning Legislation

WHAT is the Legislature in your State planning to do to the automotive industry and what are you and your fellow dealers doing to protect your rights?

Connecticut is only one State in the Union, but an attempt there to burden the industry with heavy revenue-raising legislation and the trade's reaction to the bills introduced will interest the whole country, because the story is typical of what is happening or may happen elsewhere.

yet would be subjected to an enormous rate of taxation. Similar situations were outlined as existing in New Haven and other parts of the State. Private owners of trucks also expressed their opinion, and some of them are frank to say that it will be a case of back to horses. Commissioner of Motor Vehicles Stoeckel also spoke on the bill.

From what appears to be a reliable source comes the information that the House of Representatives, numbering many truck owners, is solidly opposed to the big increases named. Truck owners in general are willing to stand even double the present fees, but they are ready to fight to the last ditch on what Commissioner Bennett deems as necessary for his department.

Car Registration Fee Based on Displacement

Following the hearing on the truck situation, the passenger car fees came in for attention. During Wednesday of show week Commissioner of Motor Vehicles Robbins B. Stoeckel gave the impression among the dealers that the new method of registration would be eight cents per cubic inch of piston displacement. However, the printed data handed out to the newspapers for publication and given the hearing was based

on a ten cent fee. The commissioner explained that it was necessary to arrive at some fair method of taxation, and inasmuch as the old A. L. A. M. formula used in his department for years did not meet the requirements and the new scheme did, all would be taxed on the same basis. Some advocated that the present scheme be retained plus an additional raise. However, the consensus of opinion was that the new scheme of piston displacement was fair to all concerned, but the rate was altogether too high. A compromise is looked for in this bill. It is interesting to note that the price for Ford registration is now \$11, but under the new method it will be \$17.70. The increase runs from 60 per cent to 125 per cent, or more.

Dealers and owners do not object to an increase, but the proposed measure is too strong. An array of legal counsel argued against the bill and private owners were heard.

Another proposition calls for a tax of one cent a gallon on gasoline. This is being fought tooth and nail. The idea of raising the driver's license fee from \$2 to \$5 is favorably regarded.

After many of the dealers had left the hall it was noised about that the dealer's license fee was up for discussion. And right here a bomb exploded. The present system, by way of explanation, is \$50 for a dealer's license, which includes five sets of plates or markers. The cost of each additional set is \$10. Now, then, it is claimed Connecticut is one of the very few States that charges the dealers \$50 to do business. But here's the nigger in the woodpile: \$100 for a dealer's license, no plates, and a charge of \$10 for each set of plates, with a limit of 12 sets. As a concrete example, the Ford distributor in Hartford operates 11 stores. To cover all these stores or branches, the dealer is going to punch a mighty big hole in a \$3,000 bill—and it may be necessary if the law goes through to close up shop. The Ford dealer holds it is class legislation, as it hits him and another Ford distributor as it hits no others. The dealer says that when he mentioned the matter to Commissioner of Motor Vehicles Stoeckel, that official said that he did not think the bill would go through, but it was stuck in just to see what would follow. A committee of Hartford dealers is to meet the commissioner and arrangements will be made for dealers from all over the State to do likewise. The dealers are organized and out for fight.

Unit Parts Service to Be Extended

MAKERS HAVE PLAN TO GIRDLE COUNTRY

*Would Bring Genuine Parts
Stocks Within Six Hours
Access of All Points*

DETROIT, March 26—Rapid progress has been made in the past few days by some of the leading unit parts manufacturers for the establishment of a nationwide distribution system for parts for assembled cars and trucks. The plan is said to have the approval of some of the leading vehicle assemblers. Plans are rapidly being brought into workable form and a definite announcement is expected in the near future.

The entire subject was considered at a conference in New York last Friday, but many details remain to be worked out. Thirty major stations where standard unit parts can be obtained by distributors and dealers are in operation, but the plan calls for twice this number of major stations and as many substations as may be needed to cover the country in such a way that no service shop will be more than six hours distant from the nearest parts depot.

The idea took nebular form in the minds of various parts and car manufacturers at about the same time, and was in recognition of the need for better servicing of automotive vehicles. There were differences of opinion as to how it should be worked out, and it was necessary to reconcile these opinions. This resulted in many informal meetings and in much missionary work. One of the leading engine manufacturers was the prime mover, and he now has associated with him some of the most prominent unit parts makers.

Truck Makers Take Action

Consideration was given to the subject at a recent meeting in Chicago of the Motor Truck Manufacturers Association, and there will be a conference here next week between committees representing the parts makers and the Motor Truck Sales Managers Association.

The depots will carry ultimately stocks of parts of eight unit manufacturers. It is estimated \$5,000,000 will be invested when the system is in complete operation.

A nation-wide advertising campaign announcing the sale of genuine parts at prices which will eliminate the pirate is planned to stimulate demand for genuine parts and to acquaint the owner with the fact that they can be obtained at the same price or less from the depot maintained under the new system. The genuine replacement parts will bear the trade mark of the unit manufacturer.

There is a wide divergence of opinion

among passenger car and truck manufacturers in regard to the merits of such a system. Some of them are in hearty accord with the movement and others are bitterly opposed to it.

Promoters of the venture contend that under this system it would be much less expensive to carry an adequate stock of parts and that it would give a tremendous stimulus to the sale of assembled vehicles. There is no idea of preventing manufacturers, distributors and dealers from carrying a stock of parts if they so desire.

Would Eliminate Duplication

In behalf of the plan it is pointed out that under the present system many duplicate stocks are carried in each city, but in the case of smaller car and truck stations these stocks are often inadequate. Then, too, the lack of uniformity in profit percentages and charges, and varying distances between assembling factories and service stocks, results in wide divergence in prices on the same part in the same city. The aggregate stock carried in some of the cities is so large, yet so spread out, that it does not meet the real needs of many of the stations, and had proved so expensive that the overhead more than absorbs the profit, even when this profit seems to be unduly high.

The result is that pirate parts manufacturers and dealers can quite easily sell these parts for a mere fraction of the price asked by the dealer with the contract. Under the new plan, distribution would be unified so that a complete stock would be carried in one central station in every important city. Dealers could carry small stocks of parts in the greatest demand and could rely on the parts establishment for less frequently called for articles. The capital tied up in parts would thereby be reduced.

One of the chief advantages would be elimination of the pirate. The parts manufacturers assert the public does not realize the great quantity and variety of inferior parts on the market, and that the average buyer does not comprehend the risk he takes in purchasing parts of this type.

Service Important Problem

All branches of the automotive industry are in agreement in the belief that the problem of service is one of major importance and that the company which provides the best service will corral the largest number of sales. Sponsors of the nation-wide parts station plan contend that it will give the maker of an assembled vehicle the advantage over manufacturers who build the greater part of their product. Better results are promised with a smaller investment of capital. It also is asserted that with

(Continued on page 38)

HAWKINS JOINS G. M. C. AS ADVISORY EXPERT

*Former Ford General Sales
Manager Takes Up New
Position April 1*

DETROIT, March 25—Norval A. Hawkins, formerly general sales manager for the Ford Motor Co. will join the General Motors Corp. on April 1 and will be a member of the advisory staff, located at Detroit, handling subjects pertaining to sales, advertising and service.

Hawkins is one of the most widely known sales executives in the industry and the success of the Ford Co. in its early days is regarded as due in large measure to his efforts. Since leaving the Ford Co. he has devoted his time to several enterprises and now is head of Hawkins, Gies & Co., accountants, with offices here. Rumors about Hawkins' future activities have been numerous in the last few months. They have connected him with General Motors, the new W. C. Durant enterprises and the new venture of F. L. Klingensmith.

Since the retirement of Hawkins from the Ford organization there has been much speculation as to his future connections because it was assumed he would remain in the automotive industry. He opened a set of books for Ford in 1903 and for three years served as auditor. He then became sales manager and continued in that capacity for 12 years until January 1919. Besides being president of Hawkins, Gies & Co., he is president of the Sturgis Steel Gocart Co. of Sturgis, Mich., and a director in several other concerns.

W. S. Hudson to Build Truck

PHILADELPHIA, March 24—William S. Hudson, president of the Hudson Motor Specialties Co. and inventor of the Hudford truck attachment, is forming a company to build a 3-ton truck which will embody in its construction many of Hudson's patented features. The vehicle will be named the Hudson Truck and it will be produced by the Hudson Motor Specialties Co. The control will be in the hands of Hudson, who is said to have evolved entirely new methods.

Haynes Reaches 60 Per Cent

KOKOMO, IND., March 24—The Haynes Automobile Co. is gradually returning to normal production schedules. With the addition of a considerable number of employees the factory now is turning out cars at more than 60 per cent of its capacity. It is expected this figure will be raised to 75 per cent in April.

South Responds to Business Uplift

SALES BASIS FIRMER, FIND GULF DEALERS

Present Purchasers, in Better Financial Positions, Reduce Risks—Farm Sales Deferred

NEW ORLEANS, March 24—The first 21 days of the month of March showed greater improvement in the automobile industry here than did the entire 30 days of any previous month since the first of November 1920. The period of depression reached its lowest ebb in December, revived somewhat around Christmas and the holidays—due largely to the pre-Christmas show—and then dropped again in January. Sales for the first three weeks of March, however, exceeded those of October 1920, the last month before the period of depression set in, by about 20 per cent, which is considered a remarkable showing.

The return to the normal of 1920 was a surprise to many dealers who had expected an improvement in the spring but had not looked for so great an advance. Truck and tractor men who have not felt the depression so heavily as the passenger car dealers have not noted much of an upturn for March, though their sales have remained steady, and there are prospects that their business will improve later in the summer and this fall. Greater diversification of crops, succeeding the hard lesson the one-crop cotton planters learned when cotton dropped from 45 cents to nine cents, is making the use of tractors and trucks almost imperative in the agricultural regions of the South, and is having a direct effect on orders for tractors for future delivery. Most of the planters are not in condition just now to accept immediate delivery on either trucks or tractors.

Plenty of Money in Territory

These conditions, both in the truck, tractor and passenger car fields is true of much of Alabama, all of Mississippi, and Louisiana, and parts of Arkansas and all of eastern Texas, which territory is tributary, in the automobile industry, to New Orleans. While the farmer has not made much money on his cotton, sugar or rice, the brokers, forwarders and other intermediate handlers of these crops have made some money; salaries in these industries have remained high and the consequence is that numbers of the city people have been able to buy passenger cars, and have bought them.

The sales of passenger cars, according to New Orleans distributors, in the cities have far exceeded their usual proportion in relation to sales of passenger cars in the rural districts and in the smaller towns where the people are directly dependent on agriculture.

The attitude of the banks toward automobile paper—though possibly not toward automobile credits—has become more free. That is to say, it is easier for the salaried man in good standing in a community to obtain the backing of his bank in the purchase of an automobile than it was three months ago, but it is just as hard for the dealer or distributor to get a large amount of credit to handle a number of automobiles as it ever has been.

On Strict Business Basis

The reason for this is not just clear, but it appears to be that the banks are treating the automobile dealers on a strictly business basis, rather than as a sort of gambling prospect as they were treated up to about a year ago. This very action by the banks seems to have created a healthier condition among the dealers themselves. Buying an automobile nowadays in the country tributary of New Orleans, is much like buying a piece of valuable real estate, or a house-full of furniture, in that the dealer is 100 per cent more careful as to whom he sells than he was six months or a year ago.

This means that more passenger cars are being paid for in shorter time, and more promptly than ever before, since the dealer—unless he be of long standing and full of capital—has to have money of his own with which to get his cars out of the railroad terminals. Consequently, he calls on the individual buyer, not only for more money down, but for larger and more prompt payments. This new condition seems to be working out well, since there is a distinct falling off in the number of suits filed by dealers to collect from time-payers, according to more than half of the dealers in New Orleans.

The new Foreign Trading Corp., the bank formed under the Edge Act recently, to aid shipments of Mississippi Valley manufacturers to foreign ports, is extending assistance to automobile shipments, with about the same freedom as to cotton and to other manufactured goods, so that considerable shipments of cars are going forward, especially to Latin-American importers and distributors.

TWENTY Pierce-Arrow two-ton trucks were delivered last month by E. T. Neal, dealer in Fresno, Cal., to the San Joaquin Light and Power Corp.

A heavy demand is being made upon the corporation for power and lights through south central California, and the new trucks are to be used in construction work.

AKRON SEES SIGNS OF TIRE SHORTAGE

American Rubber Goes on Maximum Production—Others Plan Increases

AKRON, March 25.—The fact that the American Rubber & Tire Co. has gone to maximum production with three eight-hour shifts at work is taken here as an indication that the dealers have begun to feel the shortage of tires predicted during the last month. The company is working the maximum number of men and is producing 600 tires a day. Practically all the orders which have occasioned the increased production have come from dealers. H. L. Houk, general manager, said in a statement today:

"We do not care to say that we will continue on this basis indefinitely because we are proceeding with cautious optimism. We will as long as business continues to come as at present. We made no strenuous efforts to sell tires for spring delivery last fall and as a result our dealers are badly in need of tires."

Other companies are known to be making plans to increase production and announcements are expected daily. Many of the companies have received large orders from automobile manufacturers who are resuming production.

Kenworthy Reorganized

SOUTH BEND, IND., March 24—The Kenworthy Motors Co. has been reorganized and the majority of the board of directors now consists of officers of the Dodge Mfg. Co. The new directors are F. T. Howlett, general purchasing agent; Walter E. Rowe, chief engineer; Frederick S. Willett, comptroller, and Temple Williams, assistant to M. W. Mix, president of the Dodge company. The Kenworthy plant is being operated under the direction of Rowe. The books are being brought up to date as rapidly as possible and an investigation is being made to determine the possibility of continuing operations. The difficulties of the company have been due to lack of working capital.

Federal Shows New Truck

DETROIT, March 25—Federal Motor Truck Co. is coming through with a new 5-ton which is somewhat different from the present Model XE. The chassis price is \$5,350 and the engine is a Continental four cylinder 4½ x 6 in. The gear ratio has been made such that higher speeds are possible. The first model was shown at the Detroit Automobile Show.

NATIONAL CAR DAY PROPOSED ON COAST

California Dealers to Start Movement—Pursue "Call of the Road" Plan

LOS ANGELES, March 24—The Los Angeles Motor Car Dealers Association, in conjunction with the San Francisco dealers' organization, does not propose to wait for business to "come back" in its own time. A determined effort to force business by a stimulation that never before has been tried will be put forth, and it is going to be right away.

"The Call of the Road" billboard campaign will be only the start of the project. In conjunction with the campaign, it has been agreed that there shall be a "Call of the Road" week. During that period all the motor car dealers will decorate their places of business so as to make a special appeal to outdoors activities. Salesrooms and windows are to be laid out to depict outdoor scenes. Prizes will be awarded for the best display of this nature.

Another step in this connection has been decided upon. That is, to call upon all the merchants of the State to cooperate in the undertaking. The merchants will be asked to devote one of their display windows to automobile exhibits or to concentrate upon motor toggery, camp equipment, sporting goods or anything else that will tend to point the attention of the public to the good times to be enjoyed in the open through motoring. Cards duplicating the billboards will be set up in the store windows. This is the first time on record when the general stores have been asked to join in on an automobile proposition.

It has been proposed to have a parade. This must be an event extraordinary, however. The intention in Los Angeles is to offer prizes for the best decorated cars. The assistance of the motion picture studios will be sought, and when it comes to "dolling up," the studio people have it on the whole world. The truck is not to be barred from this parade, and something startling is expected from the commercial car dealers. Nothing so common as a barren chassis will be permitted to participate.

One more proposal has been made. That is to have an "automobile day." As one dealer expressed it, "This country has a national fish day, and if all the poor fish deserve a day of their own, then certainly the motor cars have one coming to them." To start with, "automobile day" will be a California proposition, but it is believed the national organizations can be put into line so that some day the event will be observed throughout the entire country.

Correction

A typographical error in Motor World last week was responsible for the statement that W. A. Ryan is general manager of the Ford plant. Ryan is general sales manager, which position he has held for some time.

SOVIETS CONTRACT FOR SLOUGH TRUCKS

LONDON, March 24—(Special Correspondence) — The Russian Soviet Government is understood to have contracted with the Slough Trading Co. for the purchase of a large number of reconditioned trucks now stored at Slough. A very large proportion of these trucks are of American make and were sold by the War Department at the close of the war. It is reported that the Russian Government wants to buy several hundred and since the trade agreement between Russia and Great Britain has been signed it is not expected that any obstacles will be placed in the way of the transaction. The sale will help trade renewal and will stabilize the market value of several classes of motor trucks.

NEW OVERLAND HEADS FIND OUTLOOK GOOD

TOLEDO, March 24—With the return of Overland officials from the Boston Automobile Show yesterday indications appear to point to gradual increase in production at the Toledo plant of the Willys-Overland Co. Vice-President Charles B. Wilson, and Sales Manager A. C. Barber attended the show at Boston and met with the Willys New England dealers while there. It was the first opportunity the dealers have had to get acquainted with the new factory heads and also put the factory men in touch with the Eastern markets. The officials expressed themselves as pleased with the results of the show.

Employees are being added to the payroll and the production of Willys-Knight cars is increasing. The plant schedule is now running between 25 and 40 cars daily. The output varies with the demand from dealers. A schedule for Overland Fours may be announced in the near future.

Champion Calls Old Timers

DETROIT, March 25—Albert Champion, president of the Old Timers Club, has issued a call to the directors of the organization, who were elected at the meeting in Chicago during the automobile show, to meet at the Hotel Durant, Flint, Saturday and Sunday, April 2 and 3.

CLINTON, IOWA, has been designated as the national headquarters of the Mississippi Scenic Highway Association, at the national convention recently held at St. Louis, according to word received from J. C. Vanthul of this city, who was elected national secretary.

GET NEW CUSTOMERS, URGES BALDWIN HEAD

One Sale to New One Better Than 100 to Old One Truck Salesmen Told

PHILADELPHIA, March 24—Samuel M. Vaulain, known internationally as a captain of industry, and president of the Baldwin Locomotive Works, told the members of the Motor Truck Association of Philadelphia at their March meeting in the Hotel Adelphia, that business is rapidly improving. After stating that the financial structure of this country no doubt had been seriously strained to give Europe as much credit as was possible, he said:

"You motor truck salesmen—and I address you as salesmen because I am informed that most of you are salesmen and not proprietary members—are the backbone of your industry. You may have a wonderful product, a superb factory and a wise set of officers; but if you can't sell your product none of these things count.

"You salesmen should dispose of your troubles before you go out in the morning. Take a fresh look at the world before starting and go with the slogan that business is good and that you will help make it better!

"Optimism is the watchword to-day. You will sell more trucks by believing that you can sell them, than by thinking that you cannot. If you can't sell a product you may as well go out of business. The salesman is the reliable, dependable missionary of business. You cannot have manufacturing, or carry the expense of supporting workmen without salesmen to procure trade.

"It is important for you to build up a list of reliable customers—and not to lose one of them. It is more important for you to secure new customers, rather than merely to increase the number of trucks sold.

"I would rather sell one locomotive to a new customer than to sell one hundred to an old customer if my product is right, because the old customer probably is predisposed in my favor, anyway.

"The new customer means expansion. He will some day be a bigger customer. But do not forget your old customer. Follow him up and keep him satisfied."

Morse Speaks of Unrest

A. G. Morse, of New York, made a patriotic address on "Unrest in the Business World Today." He advocated regulation of immigration.

W. H. Metcalf, secretary of the association, reported on the legislative committee's activities in connection with allied associations in the State in the modification of proposed legislation would seriously affect the motor truck industry.

R. Arthur Bittong, chairman of the entertainment committee, announced the association's summer outing would be held at the Lu Lu Country Club, the third Wednesday in June.

WASHINGTON SCORES IN POST-WAR SHOW

**First in Seven Years Brings Out
Large Attendance and
Opens Market**

WASHINGTON, March 24—Washington's automobile show in Convention Hall which drew a record attendance for the week of more than 20,000 paid admissions, is proof of the value of co-operation. Due to the fact that no suitable building has been available it has been seven years since there has been an automobile show in this city. An annual "Buy a Motor Car Week" took the place of shows. This helped fill the show gap until the close of the war made shows again possible and held the dealers together.

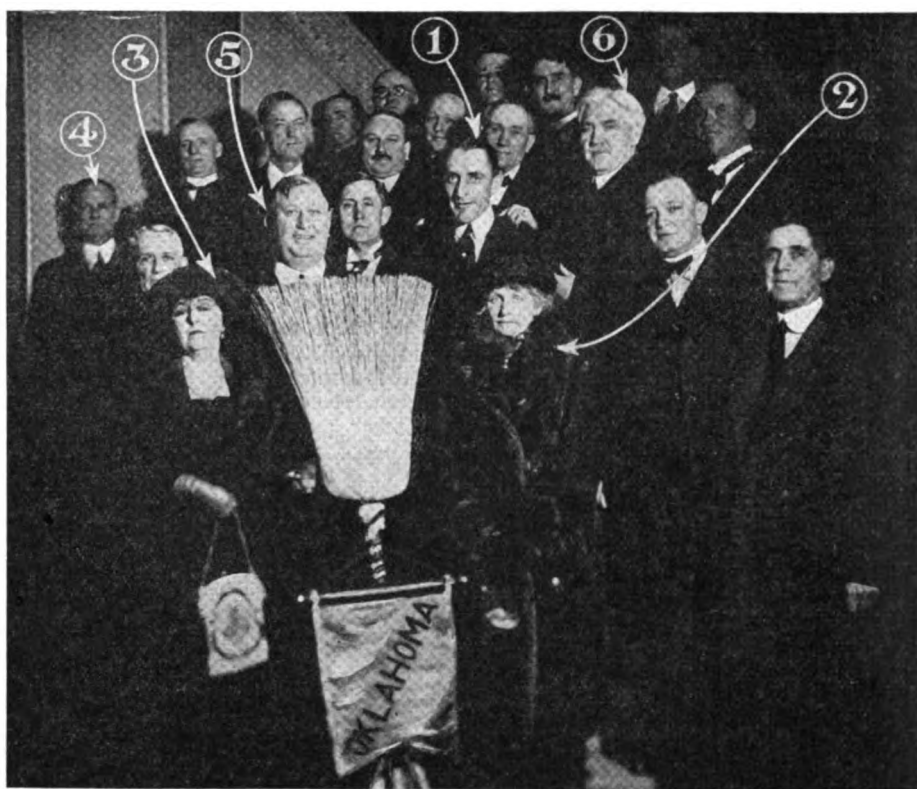
It was a business show through and through, the great majority of the exhibits being cars that the dealers took right from their sales floors. There were 18 roadsters, 60 touring cars 21 sedans, 17 coupes, 4 town cars and seven chassis on display in addition to twelve motor trucks and commercial wagons besides the accessory exhibits, which were all confined to practical things for the car. Six cylinder cars predominated there being 81 against 42 four cylinder machines, 16 of the eight cylinder type, three with twelve cylinders and one electric. Though there has at all times been more or less business in Washington the show has resulted in the closing of many prospects, some new business and the gathering of more names of people who have stated their intention of either making their first venture into the automobile owning class or decided that the old car has about outlived its usefulness than anything could have produced. There was not an exhibitor who did not express himself more than satisfied with the results that he had obtained.

Gill Opens New Branches

CHICAGO, March 24—The Gill Mfg. Co., manufacturers of Gill piston rings, has opened branch offices in the following cities: Albany, N. Y., Albuquerque, N. M., Buffalo, Des Moines, Hartford, Conn., and Syracuse, N. Y., making a total of 39 factory branches through which Gill rings are distributed to the trade. Expansions in service facilities are to provide 24 hour piston ring service to every jobber, dealer, and repair man in the country for every make of internal combustion engine manufactured.

Hold Up Reynolds Plant Sale

MT. CLEMENS, MICH., March 24—The Circuit Court of Macomb County has declined to confirm the sale of the assets of the Reynolds Motor Truck Co. by Charles J. Reimold, the receiver, to Charles M. Kennan, for \$26,250. Kennan operates a garage in this city. The report filed with the court stated that the bid of Kennan was the only one received but it was held by the judge



Did You Read About That Broom?

The newspapers in their stories of the Harding inaugural parade told about a big broom carried by somebody or other. Well—here's the broom—with 31 inches of straw—and gentleman No. 1 is "Dick" Carhart, the Overland distributor in Oklahoma City, who is strong for brooms, Harding, automobiles and Oklahoma. The broom was presented to the new president in his suite at the Willard, just before the parade, and the Oklahoma delegation, photographed in the suite, carried the broom and a lot of enthusiasm in the parade in a big yellow automobile. Some of the others in the group are: 2—Mrs. (Senator) J. W. Harreld. 3—Mrs. B. B. Jones. 4—B. B. Jones. 5—James Harris, national Republican committee-man from Oklahoma. 6—Senator J. W. Harreld

to be inadequate and it is understood that since that time Reimold has been able to get offers from two other persons who would be willing to buy the property.

UNIONTOWN EXHIBIT WIPES OUT DEPRESSION

UNIONTOWN, PA., March 24—Four days of the most successful showing of automobiles ever held in Fayette County came to a close here Saturday. The number of cash sales exceeded all past records, contracts have been placed for many cars and the "prospect" lists are bulging. Two private shows were held.

The success of the shows comes in the face of the worst business depression in the coal and coke industry in many years and is considered to indicate unmistakably that basic industrial conditions are good.

There were 40 exhibitors at the Uniontown Automotive Association show, including dealers in cars and accessories. There were 39 makes of automobiles on display in addition to the accessories and other special features. One of the features was the miniature Marmon display by the Central Auto Garage. Officers of the association are J. Q. Adams, president; Leo W. Reed, vice-president; G. B. Smith, secretary-treasurer.

SPOKANE SELLS 48 AT FIRST PAID SHOW

SPOKANE, March 25—Motor dealers of Spokane have concluded the first real motor exhibition in the history of the community. For the first time in the record of local motor shows an admission charge was made. The undertaking was by way of an experiment, but as a result it is assured that the day of the elaborate "free" motor show in Spokane has passed. Twelve thousand persons paid fifty cents each to enter the exhibition and the dealers participating were recouped in part for the outlay in assembling one of the finest exhibitions of motor cars ever brought together in the Pacific Northwest.

Forty-eight new cars were sold during the show.

500 at Closing Dinner

The management of the show secured five floors in the new Culbertson building. Each floor contained 10,000 square feet of floor space. Patrons were taken by elevator to the fifth floor and used the stairs to reach the remaining floors. Elaborate decorations were employed, music was provided and throughout the show the scene was animated. The concluding feature was a dinner at which 500 persons were entertained.

UNIT PARTS SERVICE TO BE EXTENDED

Wild-Cat Manufacturer to Disappear Under Proposed New Business Regime

(Continued from page 34)

the problem of a parts stock solved for them, dealers in assembled vehicles could devote all their time and capital to original car sales.

Another proposal for stabilization of the industry by the parts makers is denial of credit to the promotor of a vehicle factory who cannot demonstrate he has the capital to reasonably insure success. This would hit the wild-catter who is in to-day and out to-morrow leaving owners of his vehicles with orphans on their hands and at the mercy of parts pirates.

The advantages of the parts station venture are summarized in this way by one of its enthusiastic sponsors:

It would eliminate investment in parts by the manufacturers, his distributors and dealers, enabling them to use the money which would otherwise be tied up in parts in the development of sales

It would familiarize the public with the actual value offered in the assembler's products.

It would enable manufacturers, distributors and dealers to obtain genuine parts at reasonable prices upon short notice in any part of the United States and in foreign countries.

It would eliminate the use of inferior parts furnished by pirate manufacturers.

It would benefit manufacturers by assuring them of adequate service.

It would not interfere with the operations of repair shops, garages or service stations, but would permit them to do business with a smaller investment.

ILLINOIS ASSOCIATION SHOWS RAPID GROWTH

(Continued from page 16)

Edward S. Jordan, president of the Jordan Motor Car Co., spoke of the situation in both the distributor and manufacturing field, the general liquidating of stocks in the hands of dealers and the resulting improvement in the affairs of the distributor, and other pertinent matters. His talk was full of "pep," as was that of J. I. Farley, vice-president of the Auburn Automobile Co., who followed him.

Though practically all the discussions concerned the automobile itself, arrangements will be made with the N. A. D. A. to have nationally known speakers address the members from time to time on topics especially interesting to those engaged in the accessory and tire business.

A dinner and entertainment was provided the visitors by the Peoria Automobile and Accessories Association, of

MORE ARMY VEHICLES TO COME BACK TO U. S.

(By Cable to Motor World)

PARIS, March 26—The British army automobile park at Abbeville, comprising 1000 trucks and passenger cars has been purchased by a firm of private bankers with a branch in New York. Most of the vehicles are of British make, but the lot includes 350 Peerless, F.W.D., Locomobile, Pierce-Arrow, Packard and Riker trucks as well as a considerable number of Studebaker and Cadillac passenger cars. Most of the American-made vehicles will be shipped to the United States. The first lot already has been shipped.

which C. A. Porter is president. A trip was also taken to the annual Peoria show, which was held throughout the week. The show management labored under the disadvantage of having smaller quarters than in previous years, due to the destruction by fire of the show building. But the show, held in a warehouse, was a good one despite this drawback.

The officers of the association elected for the current year are: President, H. B. Pinkerton, Peoria; first vice-president, Leo A. Peil, Chicago; second vice-president, Morris Adler, Quincy; third vice-president, Ray C. Sparks, Champaign; fourth vice-president, Frank Jennings, Springfield; treasurer, Thomas J. Hay, Chicago. The directors elected to serve three years are W. H. Taylor, Chicago; Joseph Thompson, Kewaunee; R. C. Schell, Beardstown, and Ward S. Perry, Chicago. The holdover directors for two years are H. E. Halbert, Chicago; B. B. Burns, Decatur; Paul Killean, Galesburg, and J. L. Murray, Bloomington; for one year, R. C. Cook, Chicago; H. F. Horstman, Alton; W. H. Williamson, Rockford, and Harry Snyder, Danville. F. C. Zillman was reappointed secretary-manager. The choice of place for the next convention of the association was left with the board of directors.

Denlinger Sales Banned

NEW YORK, March 24—The Connecticut Telephone & Electric Co. has secured a permanent injunction against the Denlinger Lamp & Ignition Co. of Rochester, restraining it from the sale of ignition parts which were made in imitation of, and violating the patents of the plaintiff in the case.

UP to the 57th day of this year the Capital City Auto Co., New Orleans, of which Fred Perkins is president and general manager, had sold 52 Studebakers, or more than one for every working day.

HIGHER FEES VOTED BY NEW YORK SENATE

Arguments of Dealer and Owner Organizations Ignored—Associations Condemned

ALBANY, N. Y., March 25—The Senate to-day passed the Lowman bill for increased registration fees after a sharp attack by Senator Lusk upon automobile clubs which, he declared, were banded together to keep the State from raising, by motor vehicle taxation, money necessary for the maintenance of its good roads system.

Increases in passenger car registration will range from \$2.50 on low powered cars to \$6 on high powered ones. On motor trucks the increases will range from 35 per cent on lighter varieties to 50 per cent on those above 5-ton capacity, and as high as 100 per cent on the truck of 10-ton capacity or over.

In his presentation of the bill, Senator Lusk condemned those whom he termed "highly paid presidents of motor vehicle clubs and organizations," who, he said, boasted at meetings that the State of New York is spending more money for State roads than any State in the Union, and its citizens who own automobiles are paying less tax than in any other State.

Senator Lusk condemned the practise which exempted a motor vehicle from taxation because it paid an annual State license fee. He cited his own case, showing how, if he were compelled to pay tax on a \$3,000 car he owned at a tax rate of \$30 a thousand, he would pay \$90 every year instead of the \$16.86 payable under the license fee.

He told of an automobile club in one city of the State which enrolled some 6000 additional members paying \$6 a year dues so as to help defeat the increased fee bill, which would cost owners on an average \$3 a year more. He branded the proposition "so absurd and ridiculous that I am unable to see how any man can stand here and justly vote this unjust burden where it does not belong."

Car Owners Also Tax Payers

NEW YORK, March 24 — Harry Meixell, secretary of the National Automobile Chamber of Commerce legislative committee, a signer of the declaration of opposition, said to-day that Senator Lusk, in condemning the exemption of cars from personal property tax, failed to take into consideration the fact that owners of cars paid tax on their real estate and other property the same as real estate and personal property owners.

He said Senator Lusk had omitted to state whether the motor vehicle revenues were sufficient to meet road repair and maintenance costs, which owners assert is all they are designed to do. He said the chamber had exerted itself in every way in developing opposition to the bill and that no further action would be taken.

DEMAND FOR ENGINES SHOWS CARS SELLING

Continental Prepares for Normal Production by May— Truck Spurt Near

DETROIT, March 24—Steady improvement in the passenger car end of the automotive industry is demonstrated in the constantly increasing production at the Detroit plant of the Continental Motors Corp. Officials said today the plant would be on a 70 per cent production basis April 1 and with the present upward trend continuing would reach normal production by about May 1.

While there has been no marked increase in production of truck engines at the Muskegon plant, that end, they say is showing signs of improvement. With the start of roadway repair and construction and building operations throughout the country during the next few weeks the demand for trucks is expected to take a spurt. Continental officials, however, do not look for greatly increased production in the truck end for 60 days.

Renewed activity in the passenger car division is not confined to any car or group of cars but reflects conditions throughout the industry, officials say. It is significant that with the increased production Continental at present is employing only about 45 per cent of the normal force. The normal mark insofar as production is concerned, officials say, will be maintained with less than 75 per cent of the usual force.

DURANT BUYS PLANT FOR EASTERN ASSEMBLY

NEW YORK, March 28—The Durant Motor Co. of New York, a subsidiary of Durant Motors, Inc. headed by William C. Durant, has purchased the Long Island City plant of the Goodyear Tire & Rubber Co. for a price said to have been \$2,000,000. It will be used as the first of a chain of assembly plants which will be scattered about the country. Each subsidiary company will be operated under contract with Durant Motors which will direct production. The Long Island City plant is expected to supply New England, the Atlantic coast states and the export trade. The building has an area of 500,000 sq. ft. It was built by the Ford Motor Co. as an assembly plant.

Luncheons at A. C. A. Show

NEW YORK, March 25—In connection with the exhibit of fine motor cars, to be held at the Automobile Club of America during the week of April 4 to 9, there has been arranged a series of luncheon discussions to consider the more pressing problems that now face the motor car owners. The speakers during the week will include Alan R. Hawley, former president of the Aero Club of America, founder member of the A. C. A.; Alfred Reeves, general manager of the National Automobile Chamber of Commerce; Hon. John J. Lyons, Secretary of State of New York, and Hon. Herbert S. Sisson.

FORD COMPANY SELLS LAST OF CAR SURPLUS

DETROIT, March 24—Ford Motor Co. started operations this week on a six-day basis for the first time since Christmas. The company is now producing almost 3000 cars a day and according to officials orders are rapidly catching up with production. All the surplus cars on hand when plant closed Dec. 24 have been liquidated.

WINTON PRODUCTION TO REACH PEAK IN MAY

CLEVELAND, March 24—An increase in sales of cars that set in on Jan. 1 and has continued to the present, led to the statement to-day at the plant of the Winton Co. that the factory probably would be operated on maximum production capacity of 10 cars daily by May 1.

At the same time, the announcement was made that C. W. Churchill, who for a number of years has been general manager of the corporation, has resigned. Churchill retains a monetary interest in the corporation. Several years ago he came to the local plant from the New York branch of the corporation to act as sales manager. Later he was made general manager.

Another change in executives was made in the sales department when C. Miller was made manager of sales, succeeding O. F. Baughman.

SERVICE DEPOTS SEND HURRY CALL FOR HELP

NEW YORK, March 24—Service stations in this city have in the last week been getting more work in than they have in the past three months. Some of the shops have lately been so slack that forces of mechanics have been cut down to the very limit, one shop ordinarily employing eighteen men being reduced to the service manager and one mechanic. The sudden rush of service work has found most of these shops in rather bad shape to take care of orders with the reduced forces and the calls for mechanics are many. Among the shops reporting greatly increased business are Overland, Marmon, Master Truck, Automotive Service Corp. and Chevrolet.

THAT 38,000 horses have disappeared from Minnesota farms in two years, is the report of Paul M. Kirk, who is Minnesota's agricultural statistician. In 1918 the farmers of the State owned 960,000 horses worth an average of \$105. The following year the average dropped to \$98, and on Jan. 1, 1921, there were only 912,000 horses worth \$83 each.

INCOMTAXITIS SLOWS NEW YORK BUSINESS

High Price Car Demand Suffers Most in Temporary Setback —Intensify Efforts

NEW YORK, March 28—The metropolitan area is recovering from an acute attack of incomtaxitis, which slowed up passenger car sales, particularly in the high priced lines during the early part of March. Sales which dropped off from the February level during the first 30 days of this month have begun to pick up again and the prospects for April, May and June business are bright.

As an instance of the psychological effect of the filing of income tax returns and the payment of the first instalment, one dealer handling a \$3000 car had sales during March numbering 51, as compared with 86 during February. Several other dealers in high priced cars had similar experiences though two or three with decidedly popular makes had a March business considerably better than February. The income tax period seems to have had little effect on the sales of low priced cars and in several lines, these are running very strong. One dealer in a popular priced car had sales for March running only a little below 200, as compared with 150 in March a year ago.

Practically all dealers have intensified their canvassing and mail solicitation efforts and several have been added to the list who keep their establishments open evenings, with good results so far, according to reports. The junior salesman idea, under which younger men are used to develop information on prospects later to be canvassed by senior salesmen, is spreading and general good results have been obtained. Used car sales prospects have picked up with those in new car line, despite the fact that used car prices have shown little disposition to decline.

Truck sales have improved materially.

TARKINGTON TO BUILD LIGHT CAR IN FALL

ROCKFORD, ILL., March 25—The Tarkington Motor Car Co., with a plant already completed in this city, plans to begin the production of a quality, light-weight, 6-cylinder car next fall. It will have an overhead motor, carry seven passengers and offer many details in refinement designed to give the car a high salability.

The company was incorporated about a year ago by P. A. Peterson, who is identified with 25 or 30 different enterprises in this city. The factory manager is J. A. Tarkington, who has been in the automobile business for 21 years, with Rutenber, Apperson, Stoddard-Dayton and Kissel, having been with the latter company since its beginning as an automobile concern as a production executive. He is a brother of Booth Tarkington, the writer.

The company will make practically all of its own chassis.

UNDERWRITERS DROP FIXED CAR VALUES

Fire and Theft Risks to Be Adjusted on Actual Value When Lost

NEW YORK, March 28—The National Automobile Underwriters' Conference has unanimously passed a motion to abandon the valued policy for fire and theft risks. The measure takes effect May 1.

The value policy is one in which the amount of insurance is specifically named instead of depending on an adjustment to determine the actual value of the automobile at the time of loss. During the recent decline in values insurance companies found themselves carrying insurance far in excess of market values. This is a dangerous situation as it makes the companies most tempting "customers." Statistical analysis attributes much of last year's heavy losses to this evil.

On the ground that tires, motor meters and spare parts are also poor moral risks and that insurance losses are suffering from the multiplicity of claims they involve, many companies will not include them in the policy. The Conference declined to make this compulsory.

The National Automobile Underwriters' Conference has decided to continue writing full coverage on automobile collision insurance. The majority of the fire insurance companies disapproved making the deductible clause compulsory but recognized that rates would have to be increased for full coverage and instructed the rate and statistical committee of the Conference to determine the proper rate revision upward.

TRUCK OUTPUT DOUBLE DECEMBER PRODUCTION

NEW YORK, March 28—Twenty-four truck manufacturers, whose production has just been checked up are making an average of 33-1/3 per cent of normal output, as compared with 16-2/3 per cent during the period when production was at its lowest ebb.

Most of these manufacturers expect the next step upward in production to be made in April, and while a good many state frankly that they don't know how greatly production will be increased, several expect to reach 50 per cent of normal and a few 75 per cent. The average forecast of these manufacturers for the latter part of 1921 is a production of between 50 and 75 per cent of monthly averages early last year.

A Correction

In an item published in Motor World, March 9, Page 23, concerning circular letters used by the Garage Fernwood Supreme, Philadelphia, it was stated that the stationery was supplied free of charge. This was incorrect. The Good-year company sells the stationery to dealers.

OTTAWA OBSERVES AUTOMOTIVE WEEK

OTTAWA, ONT., March 26—Ottawa celebrated the week of March 21-26 as Automotive Week. In preparation for this event several new stores have been opened, others enlarged, while yet others have redecorated and brought many improvements to assist them in their desire to give better service to the citizens of Ottawa and the many thousands of tourists expected this summer.

Ottawa believes in a great increase in the number of visitors that will be coming by automobile this summer and the Automotive Week marks the opening of a real determination to be of service the moment service is desired.

G. M. ACCEPTANCE CHANGES OFFICERS

NEW YORK, March 24—Curtis C. Cooper was elected president of the General Motors Acceptance Corp. at a meeting this afternoon. He was named after a meeting of the stockholders at which these directors were elected: C. C. Cooper, Albert L. Deane, Irene du Pont, Lamot du Pont, Pierre S. du Pont, Paul Fitzpatrick, J. Amory Haskell, John J. Raskob, John J. Schumann, Jr., and Alfred H. Swayne.

Besides making Cooper president and Swayne chairman of the board, the directors elected the following officers: Vice-presidents, Deane, Schumann, Donald M. Staidal and James H. McMahon; treasurer, Reune Martin; secretary, George H. Bartholomew; auditor, F. Stanley Parson; counsel, Livingston L. Short.

Haskell remains as a director, but retired as president because of his other duties as vice-president of the General Motors Corp. in charge of operations.

Dealer Wins Contract Suit

DETROIT, March 28—C. C. Stubbs, a Kansas City dealer was awarded a verdict of \$3,692.68 in the Federal Court for eastern Michigan against the Barley Motor Car Co. of Kalamazoo for cancellation of contract.

CHICAGO AUTOMOBILE TRADE ASSOCIATION has approved the automotive exhibit in the Pageant of Progress Exposition which will be held on the Municipal Pier, Chicago, from July 30 to Aug. 14. C. S. Rieman of the Elgin Motor Car Co. is chairman of the automotive section.

The exposition, which will be a business show, is for the purpose of stimulating trade and reducing unemployment. It is aimed to include the entire country.

TEXAS DEALERS PLAN TO ASSIST FARMERS

Annual Convention Advocates Move as Beneficial to Industry—Officers Elected

FORT WORTH, TEXAS, March 26—William W. Morris of Dallas was elected President of the Texas Automobile Dealers Association and Waco selected as the next place of meeting, at the close of the annual convention of the organization held here. Other officers of the Association for the coming year are W. A. Williamson of San Antonio, first vice-president; Ben Barker of Austin, second vice-president; F. M. Bannell of El Paso, third vice-president; Percy Garrett of Fort Worth, R. S. Carter of Galveston, Joe Mitchell of Waco, R. B. Webb of San Antonio, A. D. Sory of Houston, E. Linn of Beaumont, and D. F. Safford of Dallas, were elected directors.

Co-operation and means of aiding the farmers of Texas were the key-note addresses of the convention. Former President H. L. Robertson of Houston urged closer co-operation among the dealers and declared some of the laws detrimental to the automobile industry passed at the recent session of the legislature were due to the fact that the dealers made but little effort to prevent their passage. The new president declared the automobile men must get closer together or see the industry they have built up in Texas go to the winds.

It was the prominent automobile men from the big centers who urged aiding the farmers as a means of building up an extensive automobile business in Texas. Among these were David Beecroft of New York, president of the Society of Automotive Engineers and directing editor of the Class Journal papers; Edward S. Jordan of Cleveland, president of the Jordan Motor Co.; George Hubbs of Cleveland, president of the Grant Motor Co., and A. R. Kroh.

Beecroft declared Texas possesses an unlimited possibility for the automobile dealer because of the many farms and that these farms must be connected with the cities by motor vehicles. He said the farmers must likewise increase their production through the use of motor power implements. He said anything the automobile dealers do to help the farmer would be that much toward helping their own business.

Jordan advised the dealers to get behind the farmers and play fair with the bankers. He said the alarm in many sections that the industry would soon be dominated by a few is groundless.

Starter Receivers Named

NEW YORK, March 24—Receivers have been appointed for the Liberty Starter Corp., manufacturers of starters for automobiles and airplanes with a plant at Poughkeepsie and a sales office in this city. The liabilities are listed at \$62,748 and the assets are said to be in excess of this amount. The company controls the Delano starter.

GEORGIA PROPOSES NEW CONTRACT BASIS

Would Hold Cancellations for Cause Only—Propose Increase in Discounts

ATLANTA, March 25—Contending that the contracts under which the dealers operate are arbitrary with regard to the rights of manufacturers, but that they show slight regard for the interests of the dealers, the Georgia Automotive Dealers Association has inaugurated an intensive campaign that has as its objective an improvement in this condition of affairs. The association is co-operating with the national organization in this movement.

Within the past month four sectional meetings have been held in various parts of the State, together with a meeting of the State body in Atlanta, March 10, at which time the contract matter was thoroughly discussed and resolutions adopted advocating the five important items as objectives in the national campaign. These items are outlined as follows:

First: For the automatic renewal of contracts on the basis of fair and faithful representation of the manufacturers by the dealers; Second: For contracts binding both parties whether the manufacturers be one of the parties directly participating or through distribution; Third: For the termination and cancellation of contracts upon a just cause only; Fourth: For concession of the right to the dealer to order and receive automobiles as he needs them only and to refuse acceptance of all automobiles not so ordered by him; and Fifth: For cessation of contract deposits required of dealers by manufacturers.

An increase in the discounts now allowed dealers by the manufacturers was also advocated at the various sectional meetings and at the state meeting in Atlanta.

To Guard Legislation

Just before the Georgia legislature convenes this year another State meeting of the association will probably be held at Indian Springs, Ga., at which time committees will be appointed to represent the interests of the automotive industry during the time the General Assembly is in session. As was the case last year, when the association defeated a number of obnoxious bills that were introduced, several bills are being planned for introduction at this year's session that will create an additional burden for the automobile industry in this state if they are adopted.

George Hubbs, vice-president and general manager of the Grant Motor Car Co., was the principal speaker at the State meeting in which he discussed the sort of cooperation he believed the manufacturer should give the dealer, and declared that the dealer should really be considered a partner with the manufacturer in the conduct of the automobile business.

GASOLINE BECOMES NEW AIM OF CROOKS

NEW LONDON, CONN., March 25—Connecticut authorities and automotive owners are up against a new wrinkle in crookdom, those who steal gasoline from parked motor vehicles and re-sell it. Although suspected for some time, it has remained for the New Haven, Conn., police to discover actual proof of this procedure. Unexpected return of a motorist, whose car had been parked near the Yale College Building, resulted in the sudden decamping of two men, who left a gasoline can and syphon from it to the tank of the automobile. The apparatus was turned over to the authorities. Belief of the authorities is that a gang is active stealing gasoline along systematic lines.

BETHLEHEM TO DECIDE FUTURE SALES COURSE

NEW YORK, March 25—Edward F. McGuire, vice-president of George W. Goethals & Co., an experienced automobile and industrial organizer, has been appointed to make a fresh survey of the affairs of the Bethlehem Motors Corp. He will act with Clinton E. Wood, the receiver. If McGuire deems it advisable he will undertake a vigorous selling policy looking toward the liquidation of the trucks on hand within the next three months and will report back to the creditors his conclusions as to the most advantageous course to pursue in reference to the future conduct of the company. There has been a gradual sale but the inventory is still large.

A committee of Bethlehem Motors stockholders, headed by B. W. Jones, has sent a letter to stockholders urging them to deposit their stock under a protective agreement in the hope that if conditions in the industry show a marked change for the better in the near future and that if adequate working capital can be obtained a reorganization or adjustment will improve materially the present situation of the stockholders.

DOAN MOTOR CO., Toledo Studebaker distributors, has established a three-department plan for handling the sales of used cars, which has recently developed into a large part of the business.

Arthur Garn, in charge, reports that one department rebuilds and repaints and displays these cars; another takes those which are in good shape and places them in a second salesroom, and then a special quarter is maintained for those which are sold "as is."

The plan has helped sales, Garns reports.

DURANT G. M. C. STOCK BROUGHT \$26,780,600

Dupont Report Shows \$23,790,600 Cash in Transaction—Share Value \$10.70

NEW YORK, March 26—Details, hitherto carefully concealed, of the spectacular financial transaction by which W. C. Durant retired almost over night as head of the General Motors Corp., are disclosed in the annual report of E. I. Du Pont de Nemours & Co. It shows that when Durant was unable to meet his obligations last November, the Du Pont Securities Corp. took over 2,504,273 shares of General Motors stock. He received for his holdings \$23,790,600 in cash and 40,000 shares of the stock of the Securities corporation, which was formed to buy his General Motors stock.

It is stated in the report that the taking over of the stock was at the request of Durant, who had informed the Du Pont interest that "he desired to resign and sell his interest in the corporation to liquidate his personal indebtedness, which was very large and pressing."

On the basis of the amount of money paid to Durant it is figured that he received \$9.50 per share in cash for his General Motors holdings. The 40,000 shares of stock of the Du Pont Securities Corp., it is stated, have since been exchanged for 230,000 shares of General Motors common stock, which again gives him a substantial holding in the concern. If a value of \$13 per share were placed on this amount of stock it would add \$2,990,000 to what Durant received for his original holdings and would bring the amount up to about \$10.70 a share.

At the time of the transaction there was much speculation in Wall Street as to just what amount was involved in the exchange. Estimates made at the time placed the amount at \$27,000,000, but it was also gossiped around the Street that Durant received only between \$7 and \$9 a share.

APEX TO REORGANIZE ON NEW SALES BASIS

YPSILANTI, MICH., Mar. 24—Creditors of the Apex Motor Corp. have been asked to grant an extension of time for approximately a year to permit thorough reorganization of the company on a basis of reduced overhead and economical operation. The directors have accepted the resignation of O. W. Heinz as president and general manager and elected H. T. Hanover in his place. George P. Listman of Seattle has been elected a director.

A statement sent out by the company states that its financial condition was serious at the time the change of management was made. The agreement with the finance company provides that all future business must be on a C. O. D. basis.

ASSOCIATION ACTIVITIES

Cincinnati Plans Two Shows

CINCINNATI, March 29—Cincinnati dealers will hold two automobile shows next year instead of one.

At a meeting of the Cincinnati Automobile Dealers Association it was decided to hold a fall show Oct. 8-15, and a spring show, with the date tentatively set for February. Both shows will be held at Music Hall.

The spring show hinges on the plans that can be made for properly heating the big hall at the Music Conservatory. Heretofore there has been no way of heating the wings of the hall, where the exhibits are shown, but the dealers declare they will find some way of doing it. Of the 20 members present, 18 favored the spring show, and it appears that the dealers will go to much trouble, if necessary, to give what they think the public want.

The dealers in Cincinnati are beginning to realize that one thing they need most is a full attendance at their meetings, and it is evident that they are going after the attendance.

Frank J. Santry, of the Nash distributors, made an impression in the meeting with his views on sales and organization work, as he is a great believer in having his sales force sold on their organization before going out to sell it to someone else.

W. C. Shepler gave some ideas about the proper methods of handling used cars.

Ontario Would Guard Ads

TORONTO, March 25—Resolutions requesting the appointment of a Dominion official whose duty it would be to investigate reputed fakes in advertising and prosecute persons found guilty thereof, were adopted by the Retail Automotive Dealers at their convention just closed in the Prince George Hotel.

The retailers were of the opinion that certain advertising which appeared from time to time in the press was "untruthful and reflecting on the character of those who are endeavoring to do business in an honorable manner."

The Dominion Executive of the organization will ask the Provincial Government to increase the fees of those engaged in transient trade in order to make them "contribute like all others to the development of the municipalities."

Another resolution called for a conference with the manufacturers to talk over the matter of distribution of their products. This resolution followed a lively discussion between various retail dealers and the representatives of manufacturing houses. The retailers charged that certain manufacturers were selling their products at wholesale prices to concerns which owned five or more automobiles or trucks.

E. E. Williams, representing the Dunlop Tire & Rubber Co., and others, stated

that the desire of the manufacturers was to co-operate with the retailers.

Other resolutions dealt with opposition to any amendment to the Motor Vehicle Act to increase the speed limit; another called for an increase of local police forces in the cities and towns of Ontario to cope with the increasing thefts of motors, and another aims at securing a more uniform resale price for gasoline.

"The period of readjustment has started," said T. M. Humble, who spoke on "Automobile Advertising." He urged the retailers to increase their advertising, as it penetrated everywhere.

The new officers elected were: President, J. J. Duffus, Peterboro; first vice-president, E. J. Pink, Ottawa; second vice-president, T. Copeland, Windsor; third vice-president, J. Macdonald, Stratford; treasurer, Frank McLaughlin, London; secretary, W. C. Miller, Toronto. The retiring president, Sam Rowed, and the secretary, W. C. Miller, were both recipients of suitable tokens of appreciation on behalf of the organization.

New Orleans Names Officers

NEW ORLEANS, March 24—W. P. Parkhouse, vice-president and secretary of the Abbott Automobile Co., has been elected president of the New Orleans Automobile Dealers Association, to succeed W. S. Rogers, resigned. Rene P. Bernard has been made assistant secretary of the dealers, succeeding T. B. Moody, who resigned to enter another line of work. Joseph L. Ruhl of the United Motor Car Co., J. D. Cathey of J. D. Cathey, Inc., and Ralph Cucullu of the Cucullu Motor Car Co. were elected directors. M. F. Thomson of the former board of directors resigned.

Wilmington Celebrates Show

WILMINGTON, DEL., March 24—Mayor William G. Taylor was the guest of honor at a banquet held by the Wilmington Automobile Trade Association in celebration of the success of the motor show. He made an address, in which he complimented the association on the magnitude and success of the show and gave assurance of his continued interest in the motor trade, which he characterized as one of the most important phases of the industrial life of Wilmington. The Mayor is a prominent banker.

The show committee made the banquet a real celebration with some novel stunts by members and with a fine program by the best orchestra in the city. The ground work was laid for next year's show. It is the intention to get to work on it early and utilize as many new features as possible.

Several of the members made addresses at the banquet, and they agreed that this year's exhibition was one of

the best ever held, particularly in the matter of boosting business. Many sales were reported, one man having sold one exhibition car twice, the man paying the largest forfeit getting that particular car and the other purchaser getting one like it from the shop. Many promising prospects were reported. The outlook seems to be encouraging.

Quaker Parts Men Meet

PHILADELPHIA, March 24—At the regular monthly meeting of the Automobile Accessories Business Association held at the rooms of the Philadelphia Automobile Trade Association, an exceptionally large attendance was recorded. A total of over 180 members were present. The meeting was reserved for members only and in connection with the meeting was a vaudeville show which followed the dinner and business session.

The Association went on record as endorsing Sixth and Spring Garden Streets as the proper terminal for the new bridge which is to connect Philadelphia with New Jersey, this being deemed necessary due to the tremendous amount of traffic already directed along Market Street. The next meeting of the Association will be April 15. The committee headed by George S. Fischer, in charge of the June outing, was announced and plans are well under way for this big annual two-day outing.

Okanogan Association Formed

SPOKANE, March 25—The Okanogan County Automobile Dealers' Association has been formed with 20 members. Maurice Bowen, Tonasket, is president; R. J. Frank, Oroville, vice-president; B. A. Thayer, Okanogan, secretary-treasurer; The first annual county automobile show will be held at Okanogan March 29, 30 and 31. A tent 80 by 115 feet will be used to house the show.

Galesburg Gets Road Work

GALESBURG, ILL., March 25—The Galesburg Automobile Association has done more for road improvement in this community in the last year than any other agency in previous years, annual reports of the organization show. The club has been a leader in the road oiling campaign. Plans for next year contemplate even more extensive oiling policy and work for better and more favorable motor laws.

B. H. Danforth was elected president and Fred Peterson, secretary of the organization.

Hold County Show

NEW PHILADELPHIA, OHIO—March 26—The Tuscarawas County Automobile Dealers Association held their annual show in the Ideal Garage. There were 51 cars on the floor of 25 different makes. Eight dealers were represented. The show opened March 8 and continued for a week. The sales were large and the inquiries numerous. Dealers look for their greatest year.

CHANGES IN THE TRADE

Francis Gaskins is the new manager of the Avon Tire & Rubber Co. in Cincinnati.

R. V. Usery has been appointed manager of the Keystone Tire & Rubber Co. branch, Greensboro, N. C.

Charles Crook Co., Baltimore, has been appointed direct dealer for Haynes in the Baltimore territory.

Diamond T Truck Co. has opened headquarters to distribute the Diamond T trucks in the Cincinnati territory.

H. M. Carroll has been appointed advertising and sales promotion manager of the Remy Electric Co.

H. A. Scott Motor Co., Winston-Salem, N. C., has filed an amendment to its charter changing its name to the Perfection Motor Co.

Phil Roos, with the Herschede Motor Car Co. of Cincinnati for four years, has been promoted to be sales manager of the company.

D. E. Douglas has become sales manager of the Ottawa Car Garage and will handle the selling end for Hudson, Essex and Marmon cars.

Sparger & Johnson Motor Co. has entered the Cincinnati field as a \$30,000 company. Its incorporators are E. A. Sparger and C. H. Johnson.

Ekern-Turk Mfg. Co., Pipestone, Minn., with the expiration of its contract with H. G. Paro Co., Chicago, will handle its goods direct to the jobber.

Keyes Supply Co., Ltd., Ottawa, wholesale automotive equipment dealers, has signed for the distribution of Timken, Hyatt and New Departure bearings.

Joseph J. Kuncel, of Cedar Rapids, Iowa, formerly with the Simmons Motor Co., has become sales manager for the Quigley-Loomis Motor Co., handling the Dort.

Harry E. Marshall has been appointed Pacific Coast representative of the Mueller Electric Co., Cleveland, and will maintain offices and warehouse in San Francisco.

Maurice Toback has resigned as parts manager of the Marmon Automobile Co., New York, and has joined the Sales force of the Oldsmobile Co., New York branch.

Carl W. Bettcher has been appointed sales manager of the Eastern Machine Screw Corp., New Haven, Conn., where he will give his special attention to sales of H. & G. Die heads.

Fred McCarthy has resigned as sales engineer with the Jennings corporation to become associated with the C. C. Merz Sales Co., Pittsburgh distributor of the H. C. S. car.

Evans & Ould, New York, have taken the exclusive agency for the United States for Houpt one-piece piston rings and are now building up an organization to serve repairmen wherever located.

Sidney B. Bowman Automobile Co., New York, has been appointed distributor for the complete line of Briscoe automobiles. In addition to Briscoe, Bowman handles Grant and Kissel cars.

Keystone Motors Co. has opened up salesrooms to handle the Briscoe car in Cincinnati. H. W. Kohl, the manager of the company, has been a salesman for the Briscoe for several years.

Eugene Wolfheimer, of New York, has taken over the management of the Delta

Tire & Rubber Co., New Orleans. He has been traveling for four years in southern states for the Keystone Tire & Rubber Co.

Defiance Motor Truck Co. has purchased property in Cincinnati for salesrooms and service station. The company is headed by R. A. Albrecht, with H. A. Ruffner as general manager and W. H. Maier as secretary.

George N. Parker has joined the Boston forces of the White company. Parker will be associated with Fred P. White in the company's retail department. He is one of the pioneers in the truck industry in Boston.

Marsh-Strickle Co., Spokane, has taken on the Huffman line of motor cars and trucks to be handled in this territory in addition to the Federal line of trucks, which they have distributed here for years.

Motor Car Supply Co. has been organized in Charleston, W. Va., to do an exclusive jobbing business. H. F. Shepherd is president; W. D. Harold, vice president, and George D. Cochran, secretary and treasurer.

Bishop Motor Car Co., Cincinnati, headed by Charles E. Bishop, will hereafter handle Holmes and Liberty. The company has confined its efforts heretofore to the Holmes under the firm name of Holmes-Bishop company.

A. H. McIntyre, formerly secretary of the Bay State Automobile Association, will be special representative of the territory comprising New England, eastern New York and the province of Quebec with the Haynes Automobile Co.

W. R. Melcher, formerly eastern representative of the Gemco Mfg. Co., has returned to C. A. Shaler Co., Waupun, Wis., with which he was associated during 1918-19. Melcher will act in the capacity of special jobbers' service representative.

Albert J. Romer, formerly vice president and chief engineer of the Murray Motor Car Co., Newark, N. J., and engineer and designer of the Northway passenger car, has formed the Romer Motors Corp., Boston, to manufacture the Romer car.

B. Hayner, formerly general manager for H. W. Lancashire, distributor of Dodge cars in Toledo, has left for Fort Wayne, Ind., to take over the agency for the Dodge line there. Hayner has been in the Toledo organization since it was established six years ago.

Edward J. Tallant, for many years identified with the oil trade in Philadelphia, has been elected president and general manager of the Tallant Co., Inc., exclusive distributors of Lambert "trouble-proof" cord tires. He has established headquarters in the Otis Building.

C. A. Grainger, formerly factory representative of the American Hammered Piston Ring Co., Baltimore. In the southeastern district, has been promoted to district sales manager in the territory comprising Texas, Missouri, Kansas, Arkansas and Oklahoma.

Colonial Finance Corp. and the Republic Acceptance Corp., both under the same management, have moved their executive offices from Pittsburgh to New York. These Companies are engaged in the automobile and general finance business with branches in Pittsburgh and Detroit.

R. & G. Motor Car Co., Cincinnati, has taken over the distribution of the National and has the new models on display. The sales manager of the company, B. L. Gilbert,

is an old Cincinnati and recently has been selling Pierce-Arrows in Chicago, until he returned to Cincinnati with the new company.

C. H. Libby, former sales manager of the A. L. Alexander company of Waterloo, Iowa, is now associated with the Bradley Motor Co. of that city in the same capacity. He has charge of the wholesale business for the Paige in northern Iowa and will also head the retail sales and service on the Packard.

H. I. Barber has opened in Ottawa the International Sales & Service Store, with A. D. Lane as sales manager. Both these gentlemen were previously associated with the International Harvester Co. The seven models of the International truck will be handled and a gasoline service station is being installed.

J. G. Maguire, Ottawa, has formed a company to handle his Chevrolet business with Howard Maguire as vice-president; Cecil Gervan, secretary-treasurer and sales manager. M. V. Montagano will have charge of the parts and accessories department while the superintendent of mechanical department is G. H. York.

Rodney Hallam, former New York manager of the Garford Motor Truck Co., has been appointed branch manager of the Mack International Truck Corp.'s direct factory branch for the Cincinnati territory. He has established offices in the Gwynne Building, with William G. Brown as a member of the sales force.

B. F. Page, formerly manager of the truck department of the Maxwell Motor Sales Corp., has been appointed supervisor in charge of the Omaha district for Maxwell-Chalmers and S. W. Munroe, who was for several years in charge of the New England district for the Maxwell Motor Co., Inc., is appointed supervisor of the Boston district for Maxwell-Chalmers.

Enterprise Motor Corp., handling Kelly-Springfield trucks in New York City, Brooklyn, Westchester, Long Island, and the state of New Jersey from Trenton north, is now known as the New York Kelly-Springfield Motor Corp. The officers are, Alfred G. Hare, president; E. Hunn, Jr., Vice-President and General Manager; George S. Hauck, secretary; E. H. Bowman, service manager.

Harvey J. Woodard has resigned as vice-president in charge of sales of the Republic Rubber Corp. of Youngstown, Ohio, and as president of the Canton-Blackstone Co. of Canton, Ohio, its subsidiary. Previous to joining Republic Woodard was with the Knight Tire Co. of Canton, Ohio, as sales manager and prior to that, twelve years with the Diamond Rubber Co. serving as district sales manager in New York.

Paige Distributors Meet

PHILADELPHIA, March 25—H. M. Jewett, president of the Paige-Detroit Motor Car Co., was the chief guest at a luncheon of Paige car distributors of the Mid-Atlantic section, held on the roof of the Bellevue-Stratford Hotel. The distributors were the guests of the Guy A. Willey Motor Car Co., which opened its handsome new "skyscraper" structure at Broad and Vine streets. Vice-President A. E. Maltby and President Guy A. Willey took occasion to show the visitors through the building. About one hundred of the Paige dealers attended the luncheon, which was presided over by Mr. Maltby.

COMING EVENTS

SHOWS

Bridgeton, N. J.....April 2-9.....Annual Automobile Show.
Bridgeton Automotive Ass'n.

DenverApril 3-9.....Annual Automobile Show,
Auditorium.

Gloversville, N. Y.....April 4-9.....Annual Automobile Show,
Armory, J. J. Callahan, Mgr.

SeattleApril 4-9.....Annual Automobile Show,
Motor Car Dealers' Ass'n
Arena-Hippodrome, W. J.
Coyle, Mgr.

Norfolk, Neb.....April 7-9.....Annual Automobile Show,
Automotive Trade Ass'n of
the Norfolk Commercial
Club.

Charlotte, N. C.....April 11-16.....Annual Automobile Show,
Charlotte Automotive
Trade Ass'n, W. M. Jones,
Sec'y.

Oklahoma City, Okla...April 11-16.....Annual Automobile Show,
Oklahoma Motor Car Deal-
ers' Ass'n.

Dallas, Texas.....April 11-16.....Annual Automobile Show,
Dallas Automobile Trade
Ass'n, Henry B. Marks,
Mgr.

Red Bank, N. J.....April 16-23.....Annual Automobile Show,
Monmouth County Auto-
mobile Dealers' Ass'n,
Armory.

Goldsboro, N. C.....April 20-23.....Automobile and Industrial
Exhibit, Goldsboro Auto-
mobile Trade Ass'n, W. C.
Denmark, Mgr.

Mexico City, Mexico....Apr. 20-May 5..Mexico City Show, National
Theatre Building.

RACES

IndianapolisMay 30.....Indianapolis Sweepstakes.

Uniontown, Pa.....June 18.....Speedway Events.

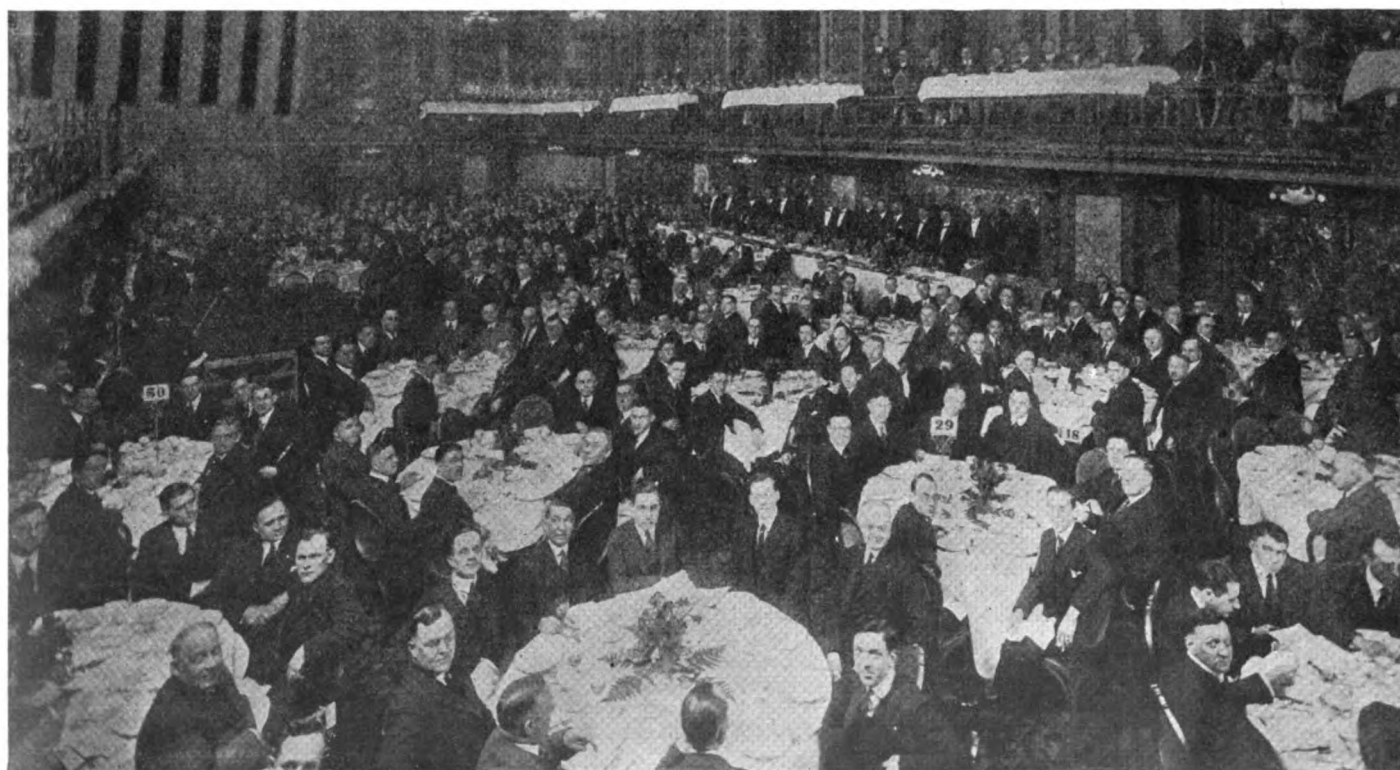
TacomaJuly 4.....Speedway Events.

Le Mans, France.....July 25.....Grand Prix.

Uniontown, Pa.....Labor Day.....Autumn Classic.

Los Angeles.....Nov. 24.....Speedway Events.

Chicago Dealers at Their Annual Dinner



That was quite some gathering of dealers at Congress Hotel in Chicago, March 14, when the Chicago Automotive Trade Association entertained at dinner during the annual meeting

The New Car and Truck Description Index

Giving the date and page number on which they appeared

Cars

Bour-Davis (7 pass. model)	May 5, 1920-42
Lorraine	June 23, 1920-34
Tulsa	July 7, 1920-32
Simplicity Six	Aug. 4, 1920-40
Buick, 1921	Aug. 18, 1920-14
Liberty (Coupe)	Aug. 18, 1920-31
Mercer (limousine)	Aug. 18, 1920-37
Forster	Aug. 25, 1920-33
Paige Big Six (Six-66)	Sept. 1, 1920-34
Lincoln	Sept. 8, 1920-34
Stanwood Six	Sept. 15, 1920-31
Packard Single Six	Sept. 29, 1920-32
Sheridan Eight	Oct. 6, 1920-32
Globe Four	Oct. 20, 1920-32
Mercedes (Post War Model)	Oct. 20, 1920-33
Lafayette (Coupe)	Oct. 27, 1920-40
McFarlan Type 147	Oct. 27, 1920-41
Nash Four	Nov. 10, 1920-34
Essex (Cabriolet)	Nov. 10, 1920-35
Handley-Knight Four	Nov. 17, 1920-32
Duesenberg 8	Nov. 17, 1920-33
Collinet (Salon)	Nov. 24, 1920-18
Pierce-Arrow	Nov. 24, 1920-32
Stevens-Duryea	Dec. 1, 1920-30
Kelsey	Dec. 1, 1920-31
Oldsmobile (Model 43-A)	Dec. 15, 1920-33

National (Sextet Phaeton)	Dec. 15, 1920-36
Lexington Series T	Jan. 5, 1921-32
Fergus, 1921	Jan. 12, 1921-23
Milburn Electric (38D & 38T)	Jan. 12, 1921-21
Haynes Model 50	Jan. 12, 1921-20
Jackson Four	Jan. 12, 1921-18
Oldsmobile Light Eight	Jan. 12, 1921-18
R & V Knight Four	Jan. 12, 1921-16
Ace	Jan. 12, 1921-15
Friend	Jan. 12, 1921-14
Parenti	Jan. 12, 1921-14
Northway 6	Jan. 12, 1921-13
Kenworthy 8	Jan. 12, 1921-13
Navarre	Jan. 12, 1921-13
Klassel Coach Sedan	Jan. 19, 1921-21
Sterling Knight	Feb. 2, 1921-11
Ambassador	Feb. 2, 1921-11
Winther	Feb. 2, 1921-11
Premocar Special	Feb. 9, 1921-23
Oldsmobile Light 8	Mar. 9, 1921-33
Wills-Sainte Claire	Mar. 16, 1921-28
Rolls-Royce	Mar. 23, 1921-32

Trucks

Kearns (% ton model)	May 5, 1920-36
Jumbo H-way Exp. (2-ton)	June 23, 1920-33
Acason (5 ton)	June 23, 1920-34
Schacht (changes)	June 30, 1920-32

Luedlinghaus (2 ton)	July 21, 1920-32
Avallacoe (1½ ton)	Aug. 4, 1920-32
Grant (1½ ton)	Aug. 11, 1920-32
Eagle (2 ton)	Aug. 11, 1920-32
Duplex (2½ ton)	Aug. 18, 1920-31
Stoughton (1½, 2 & 3 ton)	Aug. 25, 1920-33
Lorain (2 ton)	Sept. 1, 1920-30
Pierce-Arrow (2 ton x 5, 3½ ton, W-2; 5 ton, r-10)	Sept. 8, 1920-30
Lone Star (1½ ton)	Oct. 27, 1920-30
Transport (3½ ton)	Nov. 3, 1920-31
Gramm-Bernstein (1 ton)	Nov. 10, 1920-35
Avery (1 ton)	Nov. 10, 1920-36
Moline farm truck (1½ ton)	Nov. 10, 1920-36
Rumely (1½ ton)	Nov. 10, 1920-36
Armleder (1 ton)	Nov. 10, 1920-37
Commerce (Mercantile Exp.)	Nov. 10, 1920-37
Bollstrom (4 ton)	Nov. 24, 1920-34
Mack (double red, axles)	Jan. 5, 1921-33
Arles (5 ton)	Jan. 12, 1921-49
Rainier (3½ and 5 ton)	Jan. 12, 1921-31
Ward La France (5 ton)	Jan. 12, 1921-30
Bessemer (4 ton)	Jan. 12, 1921-30
Clinton (1½, 2½, 3½ & 5 ton)	Jan. 12, 1921-30
Bridgeport (1½, 2½ & 6 ton)	Jan. 12, 1921-30
Brockway (Highway Express)	Jan. 26, 1921-25
Akron Multitruck (1 ton)	Feb. 9, 1921-32
Service Speed Wagon (1 ton)	Feb. 16, 1921-32
Inter. Harvester (¾ ton)	Feb. 16, 1921-32
Case (2 ton)	Feb. 16, 1921-32
Stoughton (1 ton)	Feb. 23, 1921-33
G. M. C. (K-15, ¾ ton; K-16, 1 ton; K-41, 3½ ton; K-101, 5 ton)	Mar. 2, 1921-28
Klassel Speed Truck (1 ton)	Mar. 23, 1921-33
Cyclone (1½ ton)	Mar. 30, 1921-32
Republic Express, Model 10	Mar. 30, 1921-21
Moller	Mar. 30, 1921-21

Farm Tractor Specifications and Prices

TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity	TRADE NAME	Rating	Price	Wheels or Crawlers	Engine	Cylinders: Bore, Stroke	Fuel	Flow Capacity
All-In One	12-25	\$1975	3	Weid.	4-3 1/2 x 5 1/2	GDK	2-3	Frick	15-28	1485	4	Beav.	4-4 1/2 x 6	G,K	3-4
Allis-Chalm. B	6-12	925	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	G-O	14-28	1485	4	Wauk.	4-4 1/2 x 5 1/2	GorK	3
Allis-Chalm. G.P.	6-12	850	2	LeR.	4-3 1/2 x 4 1/2	Gas.	1-2	Grain Belt	18-36	2150	4	Wauk.	4-4 1/2 x 6 1/2	GorK	4
Allis-Chalm.	12-20	1495	4	Mid. W	4-4 1/2 x 6 1/2	Gas.	2-3	Gray	18-36	2150	4	Wauk.	4-4 1/2 x 6 1/2	GorK	4
Allis-Chalm.	18-30	2150	4	Own	4-4 1/2 x 6 1/2	G,K	3-4	Ground Hog	19-31	2000	4	Erd.	4-4 1/2 x 6	GorK	3
Allis-Chalm.	10-18	875	4	Own	4-4 1/2 x 6 1/2	G,K	3	Gt. Western St	20-30	1950	4	Beav.	4 1/2 x 6	K.	4
Allwork	14-28	2500	4	Own	4-5 x 6	GorK	3	Hart-Parr	20-30	1195	4	Own	2-6 1/2 x 7	K,D	3
Allwork	14-28	2500	4	Own	4-5 x 6	GorK	3	Hart-Parr	15-30	1595	4	Own	4-4 1/2 x 5 1/2	G,K	3
Andrews Kim D	18-36	2500	4	Clim.	4-5 x 6 1/2	GorK	4	Heider	9-16	1195	4	Wauk.	4-4 1/2 x 6 1/2	G,K	3
Ano	3-5	1500	4	Buda	1-4 1/2 x 5	Gas.	2-3	Heider	C 12-20	1195	4	Wauk.	4-4 1/2 x 6 1/2	G,K	3
Appleton	12-20	1500	4	Own	4-4 1/2 x 5 1/2	G,K	2-3	Heider	6-10	1195	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Aultman-T.	15-30	1500	4	Clim.	4-5 x 6 1/2	G,K	4	Hicks	20-30	1195	4	Wauk.	4-4 1/2 x 6	GorK	3
Aultman-T.	22-45	1500	4	Own	4-5 x 6 1/2	G,K	6	Huber Light 4	12-25	2500	4	Wauk.	4-4 1/2 x 5 1/2	GorK	3
Aultman-T.	30-60	1500	4	Own	4-7 x 9	G,K,D	8	Huber Super 4	15-30	1885	2	Midw.	4-4 1/2 x 6	Gas.	3
Automot. B-3	12-24	1785	4	Here's	4-4 x 5 1/2	Gas.	2-3	Illinois	18-36	2500	4	Clim.	4-5 x 6 1/2	G,K	4
Avery, S.R. Cul	5-10	1785	4	Own	4-3 x 4	G,K	2	Imperial	F 10-20	5000	4	Own	4-7 1/2 x 9	G,K,D	10
Avery, Cult-C	5-10	1785	4	Own	6-3 x 4	G,K	2	Indiana	F 5-10	1000	4	LeR.	4-3 1/2 x 4 1/2	Gas.	1
Avery	5-10	1785	4	Own	6-3 x 4	G,K	2	International	8-16	1000	4	Own	4-4 1/2 x 5	G,K,D	2
Avery	8-16	1785	4	Own	2-5 1/2 x 6	G,K,D	2-3	International	15-30	1950	4	Own	4-5 1/2 x 8	G,K,D	4
Avery	12-25	1785	4	Own	2-6 1/2 x 7	G,K,D	3-4	J-T	N 20-40	3485	2	Own	4-4 1/2 x 6	G,K	3-4
Avery	14-28	1785	4	Own	4-4 1/2 x 7	G,K,D	4-5	Keck-Gen	15-30	1650	4	Own	2-7 1/2 x 8	G,K	3
Avery	18-36	1785	4	Own	4-5 1/2 x 8	G,K,D	5-6	Klumb	F 16-32	1650	4	Clim.	4-5 x 6 1/2	G,K	3
Avery	25-50	1785	4	Own	4-6 1/2 x 8	G,K,D	8-10	LaCrosse	M 7-12	900	4	Own	2-4 x 6	G,K	1
Avery	45-65	1785	4	Own	4-7 1/2 x 8	G,K,D	8-10	LaCrosse	G 12-24	1250	4	Own	2-6 x 8	G,K	3
Bates All St.	15-25	1785	4	Own	4-4 1/2 x 6	Ker.	3	Lauson	12-25	1595	4	Own	2-6 x 8	G,K	3
Bates S.M.	15-22	1785	4	Own	4-4 1/2 x 6	G,K,D	3	Lauson	15-30	2525	4	Beav.	4-4 1/2 x 6	GorK	3-4
Bates M. J. F.	18-25	1785	4	Midw	4-4 1/2 x 5 1/2	Gas.	3	Lauson	21-30	2285	4	Own	2-6 x 6 1/2	G,K,D	2-3
Bates Mule H	15-25	1785	4	Midw	4-4 1/2 x 5 1/2	Gas.	3	Lauson	18-32	1985	4	Clim.	4-5 x 6 1/2	G,K	3-4
Bates Mule G	25-35	1785	4	Midw	4-4 1/2 x 6	Gas.	com.	Lauson	15-30	2775	4	Own	4-4 1/2 x 6	G,K	3
Boan	8-16	340	4	Own	1-3 1/2 x 4 1/2	G,K	2-3	Lauson	21-30	2285	4	Own	2-6 x 6 1/2	G,K,D	2-3
Boeman	2-4	340	4	Own	1-3 1/2 x 4 1/2	Gas.	1/2	Leader	18-32	1095	4	Own	4-5 x 6 1/2	G,K	3
Boer	20-30	340	4	Own	4-4 1/2 x 6 1/2	G,K,D	4	Leader	16-32	1985	4	Clim.	4-5 x 6 1/2	G,K	3-4
Boer	35-60	340	4	Own	4-6 1/2 x 8	G,K,D	8-10	Leader	18-35	2775	4	Own	4-4 1/2 x 6	G,K	3
Boring 1921	12-24	1200	3	Wauk	4-4 1/2 x 5 1/2	GorK	2	Leonard	E 20-30	2530	4	Buda	4-4 1/2 x 6	G,K	3
Bull	12-24	1200	3	Toro.	2-5 1/2 x 7	G,K	3	Liberty	A 18-32	2475	4	Clim.	4-5 x 6 1/2	G,K	4
Burn-Oil	15-30	1650	4	Own	2-6 1/2 x 7	Ker.	3	Little Bear	A 8-10	850	4	Ford	4-3 1/2 x 4	Gas.	1
Capital	15-30	1000	2	Own	4-4 1/2 x 6	Gas.	33	Little Giant	B 16-22	2200	4	Own	4-4 1/2 x 5	K.	4
Case	10-18	1250	4	Own	4-3 1/2 x 5	GorK	3	Little Giant	A 26-35	3300	4	Own	4-5 1/2 x 6	Gas.	6
Case	15-27	1885	4	Own	4-4 1/2 x 6	G,K	3	Lombard	85-150	3300	4	Own	6-5 1/2 x 6 1/2	Gas.	10
Case	22-40	3350	4	Own	4-5 1/2 x 6 1/2	G,K	4-5	Multicutator	1 1/2	225	2	Own	1-2 1/2 x 3 1/2	Gas.	3
Caterpillar T11	25	1403	2	Own	4-4 1/2 x 6	Gas.	4	Magnet	B 14-28	1875	4	Wauk	4-4 1/2 x 6 1/2	G,K	3
Caterpillar T16	12-20	1403	2	Own	4-4 1/2 x 6	Gas.	6	Market	2-4 1/2	685	4	Yur.	1-4	Gas.	1
Chase	12-25	1403	2	Buda	4-4 1/2 x 5 1/2	G,K	2-3	Master Jr.	6-10	685	4	LeR.	1-2 1/2 x 4	Gas.	1
Cletrac	12-20	1403	2	Own	4-4 x 5 1/2	G,K,D	2-3	Merry Gar 1921	2	230	2	Evln	1-2 1/2 x 4 1/2	Gas.	1
Dakota	15-27	1750	3	Dom.	4-4 1/2 x 6	Gas.	3	Minne All-P	12-25	1325	4	Own	4-4 1/2 x 7	GorK	3
Dart	15-30	1750	3	Dom.	4-4 1/2 x 6	Gas.	3	Mohawk 1921	8-16	785	4	Light	4-3 1/2 x 4 1/2	GorK	1-2
Deane	20-30	2500	4	Buda	4-4 1/2 x 6	Gas.	3	Moline Univ D	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2
Dell	20	2400	4	Cont.	4-4 1/2 x 5 1/2	Gas.	3	Moline Orch	9-18	1075	2	Own	4-3 1/2 x 5	Gas.	2
De-lt-All	4-6	595	4	Own	1-4 1/2 x 5	Gas.	5-6	Monarch 2nd	30-20	3500	2	Beav.	4-4 1/2 x 6	Ker.	4
Eagle	12-22	1390	4	Own	2-7 x 8	GorK	3-4	Motor	15-30	2250	4	Buda	4-4 1/2 x 6	Gas.	3
Eagle	16-30	1850	4	Own	2-8 x 8	GorK	4-5	New Britain. 1	3-6	425	4	Own	2-3 1/2 x 4	Gas.	3
E-B	12-20	1390	4	Own	4-4 1/2 x 5	GorK	4	New Britain. 2	3-6	425	4	Own	2-2 1/2 x 4	Gas.	3
E-B	12-20	1390	4	Own	4-4 1/2 x 5	GorK	4	Nichols-Shop	20-42	3100	4	Own	8 x 10	GorK	3-6
E-B	16-32	1390	4	Own	4-5 1/2 x 7	GorK	4	Nichols-Shop	25-50	3460	4	Own	9 x 12	GorK	4-7
E-B Reeves	40-65	2000	4	Own	4-7 1/2 x 9	GorK	8-10	Nilson Sanier	20-40	2675	5	Wauk	4-5 x 6 1/2	G,K	4
Evans	18-30	2000	4	Buda	4-4 1/2 x 6	G,K	3	Oil Pull	K 12-20	1785	4	Own	2-6 x 8	K,D	3
Fagel	9-12	1525	4	Lyc.	4-3 1/2 x 5	Gas.	2	Oil Pull	H 16-30	2665	4	Own	2-7 x 8 1/2	K,D	3
Farm Horse	18-30	1885	4	Clim.	4-5 x 6 1/2	G,K	3-4	Oil Pull	G 20-40	3750	4	Own	2-8 x 10	K,D	5-6
Farguhar	15-25	1885	4	Buda	4-4 1/2 x 6	G,K,D	3-4	Oil Pull	E 30-60	5275	4	Own	2-10 x 12	K,D	8-10
Farguhar	18-35	1885	4	Own	4-6 x 8	G,K,D	4-5	Oldsmar Gar.	21 1/2-5	395	4	Own	1-5 1/2 x 5 1/2	G,K,D	3-4
Farguhar	25-50	1885	4	Own	4-7 x 8	G,K,D	6-7	Oliver	A 15-30	395	2	Beav.	4-4 1/2 x 6	GorK	3-4
Fitch	20-35	1885	4	Clim.	4-5 x 6 1/2	GorK	3-4	Once Over Til-	12-25	3000	4	Strns	4-4 1/2 x 6	Gas.	2
Flour City	20-35	1885	4	Own	4-5 1/2 x 6	Ker.	4-6	Parrett	K 15-30	1950	4	Pitt	4-4 1/2 x 6	G,K	3
Flour City	30-50	1885	4	Own	4-6 1/2 x 7	Ker.	6-8	Peoria	L 12-25	1785	4	Clim.	4-5 x 6 1/2	G,K	3
Flour City	40-70	1885	4	Own	4-7 1/2 x 9	Ker.	8-10								
Fordson	20	625	4	Own	3 1/2 x 4	G,K	2								
Franklin Bull G	18-30	4000													

ABBREVIATIONS; G—Gasoline. K—Kerosene. D—Distillate. Flow capacity varies in relation to operating conditions. Figures are based on 14-in. plows. LeR—LeRoi. Clim—Climax. Beav—Beaver. Dom—Doman. Cont—Continental. Wauk—Waukegan. Wisc—Wisconsin. T.C.—Twin City. Yur—Yurac. Evln—Evinrude. Midw—Midwest. Weid—Weideley. Com—Commercial Tractor. *—Crawler type. All others are wheel

Specifications of Current Models of Passenger Cars

NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan	NAME AND MODEL	Engine Make	Cylinders: Bore and Stroke	WB	Tires	2-Pass.	5-Pass.	7-Pass.	Coupe	Sedan
Ace.....	G	6-3 1/2 x 5	123	32x4	\$2975	\$2975	\$3680	\$3680	Maibohm.....	B	6-3 1/2 x 4 1/2	116	32x4	\$1575	\$1575	\$2395	\$2395
Ace.....	H	6-3 1/2 x 5	123	32x4	2975	2975	.....	3680	3680	Marmont.....	34	6-3 1/2 x 5 1/2	136	32x4 1/2	5300	\$5000	6150	6600
Ace.....	L	6-3 1/2 x 5	116	32x4	2260	2260	.....	.....	.....	Maxwell.....	25	6-3 1/2 x 4 1/2	109	30x3 1/2	995	995	1595	1695
Allen.....	Series 43	4-3 1/2 x 5	110	32x4	1395	1395	.....	.....	2395	McFarlan.....	1921	6-4 1/2 x 6	140	33x5	6300	6300	7500	7500
Ambassador.....	R	12-2 1/2 x 5	136	32x4 1/2	.....	.....	.....	.....	.....	Mercer.....	Series 5	6-3 1/2 x 4 1/2	132	32x4 1/2	3950	3950	5150	5650
American Six.....	C	6-3 1/2 x 5	127	32x4	2395	2395	\$2475	3295	3495	Merit.....	Walk	6-3 1/2 x 4 1/2	119	32x4	2245	2245	.....	.....
Anderson.....	Series 40	6-3 1/2 x 4 1/2	120	33x4	2195	1795	1845	2795	2795	Meteor.....	R&R	6-3 1/2 x 5	129	32x4 1/2	5500	5500	.....	.....
Apperson.....	8-21-S	8-3 1/2 x 5	130	34x4 1/2	.....	3500	4500	4500	4500	Metz.....	M6	6-3 1/2 x 5	120	32x4	1995	1995	2795	2895
Apperson.....	Anniversary	8-3 1/2 x 5	130	34x4 1/2	.....	4250	4250	.....	.....	Mitchell.....	F-40	6-3 1/2 x 5	120	33x4	11750	1750	1960	2800
Auburn.....	6-39	6-3 1/2 x 4 1/2	120	33x4	1745	1695	1695	2795	2795	Moon.....	6-48	6-3 1/2 x 4 1/2	127	34x4 1/2	.....	1995	1995	2895
Beggs.....	20T	6-3 1/2 x 4 1/2	120	33x4	1885	1885	.....	2785	2885	Murray-Mac Six.....	Own	8-3 1/2 x 5	128	34x4 1/2	4250	4250	4250	.....
Bour-Davis.....	21S	6-3 1/2 x 4 1/2	126	33x4 1/2	2585	.....	2585	.....	.....	Nash.....	681-6	6-3 1/2 x 5	121	33x4	1695	1695	1850	.....
Bradley.....	Four	4-3 1/2 x 5	116	33x4	.....	1265	.....	.....	.....	Nash.....	682	6-3 1/2 x 5	127	34x4 1/2	.....	1875	2650	2895
Brewster.....	91	4-4 x 5 1/2	109	31x4	1285	1285	.....	1885	1885	Nash Four.....	41-4	4-3 1/2 x 5	112	32x3 1/2	1395	1395	1985	2185
Briscoe.....	4-34	4-3 1/2 x 5	109	31x4	1285	1285	.....	1885	1885	National Sextet.....	BB	6-3 1/2 x 5 1/2	130	32x4 1/2	3750	3750	4900	4950
Buick.....	21-44-5-6-7	6-3 1/2 x 4 1/2	118	33x4 1/2	1795	1795	.....	2585	2895	Nelson.....	D	4-3 1/2 x 4 1/2	104	32x4	.....	1900	.....	.....
Buick.....	21-48-9-50	6-3 1/2 x 4 1/2	124	24x4 1/2	.....	2065	.....	2985	3295	Noma.....	1C	6-3 1/2 x 4 1/2	128	32x4 1/2	3000	3200	.....	4450
Cadillac.....	59	8-3 1/2 x 5 1/2	132	35x5	3790	3790	.....	4950	4950	Norwalk.....	430-KS	4-3 1/2 x 5	116	32x3 1/2	.....	1285	.....	.....
Case.....	V	6-3 1/2 x 5 1/2	126	34x4 1/2	2650	2650	3400	3750	3750	Oakland.....	34-C	6-2 1/2 x 4 1/2	115	32x4	1395	1395	2065	2065	
Chalmers.....	6-30	6-3 1/2 x 4 1/2	117	32x4	1795	1795	1945	2595	2745	Ogren.....	6-60	6-3 1/2 x 5 1/2	134	33x5	3500	3900	5000	5400	
Chalmers.....	Tourist	6-3 1/2 x 5	113	32x3 1/2	.....	1250	.....	.....	.....	Oldsmobile.....	43-A	4-3 1/2 x 5 1/2	115	32x4	1445	1445	2145	2145
Champion.....	Special	6-3 1/2 x 5	118	32x4	1595	1595	.....	.....	.....	Oldsmobile.....	47	8-3 1/2 x 4 1/2	.....	32x4	1695	.....	2395	2395
Chandler.....	490	4-3 1/2 x 4	102	30x3 1/2	795	820	1325	1375	1375	Overland.....	4	4-3 1/2 x 4	100	30x3 1/2	895	895	1425	1475	
Chevrolet.....	FB	4-3 1/2 x 5 1/2	110	33x4	1320	1345	2075	2075	2075	Packard.....	Single-Six	6-3 1/2 x 4 1/2	116	33x4 1/2	2975	2975	4150	4250	
Cleveland.....	40	6-3 1/2 x 4 1/2	112	32x4	1465	1465	2375	2475	2475	Packard.....	Twin Six	12-3 x 5	136	35x5	6000	6000	8200	8450	
Climber Six.....	S	6-3 1/2 x 5	125 1/2	32x4 1/2	2750	2750	.....	.....	.....	Paige.....	6-42	6-3 1/2 x 5	119	32x4	1795	1795	2600	2720
Cole.....	870	8-3 1/2 x 5 1/2	127	33x5	3250	3250	4250	4450	4450	Paige.....	6-66	6-3 1/2 x 5	131	33x4 1/2	2985	.....	2895	3775
Columbia.....	D-C&CS	6-3 1/2 x 4 1/2	115	32x4	1945	1795	2895	2895	2895	Pan American.....	E&F-6-55	H-S	6-3 1/2 x 5	121	33x4	2250	2250
Comet.....	C-53	6-3 1/2 x 5 1/2	125	33x4 1/2	2350	2450	3650	3650	3650	Parenti.....	1921	6-3 1/2 x 4 1/2	125	32x4	2000	2000	3000	3000	
Commonwealth.....	44	4-3 1/2 x 5	117	32x4	1595	.....	2465	2465	2465	Paterson.....	650	6-3 1/2 x 4 1/2	120	33x4	1895	1925	2895	2895
Crawford.....	21-6-40	6-3 1/2 x 5 1/2	122 1/2	32x4	3000	3000	.....	.....	.....	Peerless.....	56-S-7	6-3 1/2 x 5	125	34x4 1/2	2290	2990	3680	3950
Crow-Elkhart.....	L63-65	4-3 1/2 x 5	117	32x3 1/2	1295	1295	.....	2195	2195	Piedmont.....	4-30	4-3 1/2 x 5	116	32x3 1/2	1455	.....	.....	.....
Crow-Elkhart.....	S63-65	6-3 1/2 x 5	117	33x4	1545	1545	.....	2395	2395	Piedmont.....	6-40	6-3 1/2 x 4 1/2	122	32x4	1945	.....	.....	.....
Cunningham.....	V-4	8-3 1/2 x 5	132	35x5	6200	6200	6700	7600	7600	Pierce-Arrow.....	Own	6-4 x 5 1/2	138	35x5	8000	7500	9000	9000	
Daniels.....	D-19	8-3 1/2 x 5 1/2	132	34x4 1/2	5350	5350	6250	6050	6050	Pilot.....	6-50	6-3 1/2 x 5	126	32x4 1/2	2285	2285	3600	3600	
Davis.....	51-57	6-3 1/2 x 4 1/2	120	33x4	1995	1895	2160	2795	2795	Porter.....	40	4-4 x 6 1/2	142	35x5	6750	Chassis s Price	.....	.....
Dispatch.....	G	4-3 1/2 x 5	120	34x4	1290	1350	1525	1575	1575	Premier.....	6-D	6-3 1/2 x 5 1/2	126 1/2	33x5	4000	14600	4900	5600	
Dixie Flyer.....	H-S-70	4-3 1/2 x 5	112	32x4	1595	1595	2570	2570	2570	Premcar.....	6-40-A	6-3 1/2 x 4 1/2	117	32x3 1/2	1295	.....	.....	.....
Dodge Brothers.....	Own	4-3 1/2 x 5	114	32x3 1/2	1235	1235	1900	2150	2150	Premcar.....	4-80	4-4 x 6	117	32x4 1/2	3865	.....	.....	.....
Dorris.....	6-80	6-4 x 5	132	33x5	14785	4785	5800	6690	6690	Raleigh.....	A-6-60	6-3 1/2 x 5	122	32x4 1/2	2750	2750	3600	3700	
Dort.....	17-A	4-3 1/2 x 5	108	31x4	1215	1215	1865	1995	1995	Ranger.....	A-20	4-3 1/2 x 5	116	32x4	.....	.....	.....	.....
Dupont.....	A	4-3 1/2 x 5 1/2	124	32x4 1/2	3400	3400	.....	4900	4900	R & V Knight.....	R	4-3 1/2 x 5	116	32x4	2150	2150	2850	2950
Elcar.....	7-R	6-3 1/2 x 4 1/2	117	33x4	1795	1795	2500	2600	2600	R & V Knight.....	J	6-3 1/2 x 4 1/2	127	32x4 1/2	3350	3350	4000	4200	
Elgin.....	K-1	6-3 1/2 x 4 1/2	118	33x4	1895	1775	2685	2685	2685	Reo.....	T-6	6-3 1/2 x 5	120	33x4	1850	1850	2700	2750	
Essex.....	A	4-3 1/2 x 5	108 1/2	32x4	1595	1595	2100	2450	2450	Revere.....	C	4-3 1/2 x 6	131	32x4 1/2	4850	4650	4650	6500	
Ferris.....	Cont.	6-3 1/2 x 5 1/2	130	32x4 1/2	3350	.....	3350	4875	4875	Roamer.....	6-54-E	6-3 1/2 x 5 1/2	130	32x4 1/2	.....	.....	4500	4800
Ford.....	T	4-3 1/2 x 4	100	30x3 1/2	395	440	745	795	795	Rock Falls.....	14000	6-3 1/2 x 5 1/2	136	35x5	.....	.....	.....	.....
Franklin.....	9-B	6-3 1/2 x 4	115	32x4	2700	2800	2950	3850	3850	Rolls-Royce.....	Own	6-4 1/2 x 4 1/2	143 1/2	33x5	11,500	Chassis s Price	.....	.....
Friend.....	Four	4-3 1/2 x 4 1/2	112	32x3 1/2	1585	1585	2485	2585	2585	Saxon.....	125	4-3 1/2 x 5	112	32x4	1675	1675	2475	2475	
Globe.....	B-10	4-3 1/2 x 5	115	32x4	.....	.....	.....	.....	.....	Sayers Six.....	DP	6-3 1/2 x 4 1/2	118	33x4	2495	2195	3295	3295
Grant.....	HX	6-3 1/2 x 4 1/2	116	32x4	1550	1550	2450	2450	2450	Scraps-Booth.....	B-39-42	6-2 1/2 x 4 1/2	115	32x4	1545	1545	2215	2295	
Gardner.....	G	4-3 1/2 x 5	112	32x3 1/2	1195	1195	2145	2145	2145	Seneca.....	L	4-3 1/2 x 4 1/2	108	30x3 1/2	1185	1185	1850	1850	
Halladay.....	21	6-3 1/2 x 5	116	33x4	.....	2285	.....	.....	.....	Severin.....	Six	6-3 1/2 x 5 1/2	122	32x4	2500	.....	.....	.....
Handley-Knight.....	Kn't	4-4 1/2 x 4 1/2	125	32x4 1/2	.....	2985	.....	4185	4185	Sheridan.....	4	4-3 1/2 x 5 1/2	116	33x4	1685	1685	.....	.....
Hanson Six.....	60	6-3 1/2 x 4 1/2	121	32x4	2365	2185	2285	3165	3165	Sheridan.....	8	8-3 1/2 x 4 1/2	132	33x5	.....	.....	.....	.....
Hatfield.....	A-42	6-3 1/2 x 5	115	32x4	1695	1695	2595	2595	2595	Skelton.....	35	4-3 1/2 x 5	112	32x3 1/2	1295	1295	1650	1650	
Haynes.....	47	6-3 1/2 x 5	132	34x4 1/2	3500	2935	2935	4250	4250	Standard.....	J	6-3 1/2 x 5	127	34x3 1/2	3400	3400	4200	4800	
Haynes.....	48	12-2 1/2 x 5	132	34x4 1/2	4200	3635	3635	4950	4950	Stanley Steamer.....	Own	2-4 x 5	130	34x4 1/2	3950	3950	5650	5775	
Huffman.....	R	6-3 1/2 x 4 1/2	120	32x4	1995	1995	.....	2975	2975	Stanwood Six.....	Cont.	6-3 1/2 x 4 1/2	118	33x4	2050	2050	2900	2900
H.C.S.....	Series 3	4-3 1/2 x 5	120	32x4 1/2	2925	2975	3650	.....	.....	Stearns.....	SK-L	4-3 1/2 x 5 1/2	125	34x4 1/2	2550	2450	2675	3400
Holmes.....	Series 4	6-3 1/2 x 4 1/2	126	34x4 1/2	3350	.....	3350	4250	4500	Stevens.....	90	6-3 1/2 x 4 1/2	122	33x4 1/2	2400	2400	3400	3400
Hudson Super 6.....	O	6-3 1/2 x 5	126	34x4 1/2	2400	3625	2400	3275	3400	Stevens Duryea.....	E	6-4 1/2 x 5 1/2	138	35x5	8500	8000	9300	9500	
Hupmobile.....	Series R	4-3 1/2 x 5 1/2	112	32x4	1685	1685	2725	2800	2800	Studebaker.....	EJ-40	6-3 1/2 x 4 1/2	112	32x4	1850	1850	2150	2150	
Jackson.....	638	6-3 1/2 x 4 1/2	121	32x4 1/2	2685	1950	3760	3760	3760	Studebaker.....	EH-50	6-3 1/2 x 5	119	32x4	1750	1750	2650	2750	
Jordan.....	M	6-3 1/2 x 4 1/2	120	32x4	2650	2650	2875	3700	3700	Stutz.....	EG-60	6-3 1/2 x 5	126	33x4 1/2	3900	4000	5500	5500	
Kenworthy.....	8-90	8-3 x 5 1/2	130	32x4 1/2	5000	5000													

Specifications of Current Motor Truck Models

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
Acason, R	1 1/2	\$2260	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Conestoga, 30	2	.....	3 1/2 x 5	36x4	36x4 1/2	W	Gramm-Bern., 35	3 1/2	\$4375	4 1/2 x 5 1/2	36x5	40x5 1/2	W
Acason, RB	1 1/2	2485	3 1/2 x 5 1/2	36x3 1/2	36x6	W	Cook, 41	2	2000	4 1/2 x 5 1/2	36x6	38x7 1/2	W	Gramm-Bern., 50	5	5275	4 1/2 x 6	36x6	40x6 1/2	W
Acason, H	2 1/2	3295	4 1/2 x 5 1/2	36x4	36x4 1/2	W	Corbett, E	1	2400	3 1/2 x 5	34x3 1/2	34x4	W	Hahn, J4	1	.....	3 1/2 x 5	34x5	34x5 1/2	W
Acason, L	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Corbett, D	1 1/2	2800	3 1/2 x 5	36x3 1/2	36x5	W	Hahn, CD	1 1/2	.....	4 1/2 x 5 1/2	36x3 1/2	36x6	W
Acason, M	5	5250	5 x 6 1/2	36x6	40x12	W	Corbett, C	2	3500	4 1/2 x 5 1/2	36x3 1/2	36x7	W	Hahn, EE	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W
Ace, C	1 1/2	2750	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Corbett, B	2 1/2	3850	4 1/2 x 5 1/2	36x4	36x7	W	Hahn, F	3 1/2	.....	4 1/2 x 5 1/2	36x5	38x10	W
Ace, A	2 1/2	3450	4 1/2 x 5 1/2	36x4	36x7	W	Corbett, A	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x10	W	Hahn, EF	5	.....	4 1/2 x 6	36x6	40x12	W
Ace	3	3650	4 1/2 x 5 1/2	36x6	36x8	W	Corbett, AA	5	5500	4 1/2 x 6	36x6	40x6 1/2	W	Hal Fur, E	1	2350	4 x 5	35x5 1/2	35x7 1/2	W
Acme, B	1 1/2	2175	3 1/2 x 5	34x3 1/2	34x5	W	Dart, S	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x6	W	Hal Fur, B	2 1/2	3250	4 1/2 x 5 1/2	35x5	38x7 1/2	W
Acme, F	1 1/2	2475	3 1/2 x 5	34x3 1/2	34x5	W	Dart, M	1 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Hal Fur, F	3 1/2	4250	3 1/2 x 5	34x3 1/2	38x7 1/2	W
Acme, A	2	3050	4 1/2 x 5 1/2	36x4	36x7	W	Dart, W	3 1/2	.....	4 1/2 x 6	36x5	36x10	W	Hall	1 1/2	3100	3 1/2 x 5	34x3 1/2	38x7 1/2	W
Acme, C	3 1/2	4050	4 1/2 x 5 1/2	36x5	40x10	W	Day-Elder, A	1	2225	3 1/2 x 5	34x3 1/2	34x4	W	Hall	2 1/2	3275	4 1/2 x 5 1/2	36x4	36x8	W
Acme, E	5	5150	4 1/2 x 6	36x6	40x12	W	Day-Elder, B	1 1/2	2425	3 1/2 x 5	34x3 1/2	34x5	W	Hall	3 1/2	4100	4 1/2 x 5 1/2	36x5	38x5 1/2	W
Acme, G	3 1/2	1790	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Day-Elder, D	2	2900	4 1/2 x 5 1/2	36x4	36x7	W	Hall	5	5100	4 1/2 x 6	36x5	40x6 1/2	W
Albion Multi-Trk 20	1 1/2	.....	4 x 5 1/2	34x5	34x5	B	Day-Elder, C	2 1/2	3125	4 1/2 x 5	36x4	36x7 1/2	W	Hall	7	5100	4 1/2 x 6	36x5	40x6 1/2	C
Al-Power, C	1 1/2	5800	4 1/2 x 6	36x7	36x10	W	Day-Elder, E	3 1/2	3850	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Harvey, WEA	1 1/2	2550	4 1/2 x 5 1/2	34x3 1/2	34x5	W
Al-American, B-1	1 1/2	1795	3 1/2 x 5	32x4	32x4	I	Day-Elder, F	5	4875	4 1/2 x 6	36x5	36x6 1/2	W	Harvey, WFA	2 1/2	3300	4 1/2 x 5 1/2	36x4	36x7	W
Al-American C-1	1 1/2	2195	3 1/2 x 5	34x4	34x5	I	Day-Elder, G	1 1/2	2180	3 1/2 x 5 1/2	34x4	34x5	W	Harvey, WHA	3 1/2	4300	4 1/2 x 6	36x5	36x5 1/2	W
American, 25	2 1/2	3575	4 x 6	36x4	36x4 1/2	W	Dea, F	2	2590	3 1/2 x 5 1/2	35x5 1/2	34x7 1/2	W	Harvey, WKA	5	5200	4 1/2 x 6	36x6	40x6 1/2	W
American, 40	4	4575	4 1/2 x 6	36x5	36x5 1/2	W	Dea, G	1 1/2	2550	3 1/2 x 5	35x5	36x8	I	Hawkeye, K	1 1/2	2365	3 1/2 x 5 1/2	34x3 1/2	34x5	I
American, 45	1	1675	3 1/2 x 5	33x5 1/2	33x5 1/2	I	Dea, H	2	2750	3 1/2 x 5	35x5	36x7 1/2	I	Hawkeye, M	2	2915	4 1/2 x 5 1/2	36x4	36x5	I
American, D	1 1/2	1915	3 1/2 x 5 1/2	34x3 1/2	34x4	I	Dea, I	2	2250	4 1/2 x 5 1/2	34x3 1/2	35x5 1/2	W	Hawkeye, N	3 1/2	4345	4 1/2 x 6	36x5	38x10	I
American, E	1 1/2	2095	4 1/2 x 5 1/2	36x4	36x7	I	DeKalb, E2 1/2	2 1/2	2600	4 1/2 x 5 1/2	36x4	36x6	W	Hendrickson, K	5	4300	4 1/2 x 6	36x4	36x7	W
American, F	2 1/2	3975	4 1/2 x 6	36x5	36x10	I	Demby, 33	1 1/2	2300	3 1/2 x 5	35x5 1/2	35x7 1/2	I	Hendrickson, J	2 1/2	3150	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Armstrong, HW	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x7	W	Demby, 134	2	2800	3 1/2 x 5	36x3 1/2	36x6	I	Hendrickson, J	3 1/2	3975	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Armstrong, KW	3 1/2	.....	4 1/2 x 6	36x5	36x5 1/2	W	Demby, 25	3	3600	4 1/2 x 5 1/2	36x4	36x7	I	Highway, A410	4	.....	4 x 6	36x5	36x6 1/2	W
Armstrong, 20	3 1/2	.....	4 1/2 x 6	36x5	36x5 1/2	W	Demby, 27	4	4600	4 1/2 x 5 1/2	36x5	36x5 1/2	I	Highway, B510	5	.....	4 x 6	36x5	40x6 1/2	W
Atco, B	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Demby, 210	5	5350	4 1/2 x 5 1/2	36x6	40x6 1/2	I	Higra, A17	1 1/2	1850	3 1/2 x 5	35x5 1/2	35x7 1/2	W
Atco, B1	1 1/2	.....	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Dependable, A	1	1650	3 1/2 x 5	34x5	36x6	W	Higra, A18	1	2100	3 1/2 x 5	35x5 1/2	35x7 1/2	W
Atco, A	2 1/2	.....	4 1/2 x 5 1/2	36x4	36x8	W	Dependable, C	1 1/2	2350	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Higra, B20	1 1/2	2500	4 1/2 x 5 1/2	36x4	36x6 1/2	W
Atlas, M.D.	1 1/2	.....	3 1/2 x 5	32x4 1/2	32x4 1/2	I	Dependable, D	2	2650	4 x 5 1/2	34x5	36x6	W	Higra, B21	1 1/2	2075	3 1/2 x 5	34x3 1/2	34x6	I
Atterbury, 20R	1 1/2	2775	3 1/2 x 5	34x3 1/2	34x5	W	Dependable, E	2 1/2	2950	4 1/2 x 5 1/2	36x4	36x7	W	Higra, B22	1 1/2	1875	4 x 5 1/2	34x3 1/2	34x6	I
Atterbury, 7CX	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x4 1/2	W	Dependable, G	3 1/2	3550	4 1/2 x 6	36x6	38x7	W	Higra, B23	1 1/2	.....	4 1/2 x 5 1/2	36x4	36x4 1/2	W
Atterbury, 7D	3 1/2	4175	4 1/2 x 5 1/2	36x5	40x5 1/2	W	Diamond, T, FS	1 1/2	2500	.....	.....	.....	.....	Higra, B24	3 1/2	.....	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Atterbury, 8E	5	5575	4 1/2 x 6	36x6	40x6 1/2	W	Diamond, T, O	1 1/2	2960	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Higra, B25	5	.....	4 1/2 x 6	36x5	40x6 1/2	W
Autocar, 21UP	2	2300	4 1/2 x 5 1/2	34x4	31x5	D	Diamond, T, U	1 1/2	2650	3 1/2 x 5 1/2	36x4	36x7	W	Indep'd (Iowa), G	1 1/2	2040	3 1/2 x 5 1/2	34x3 1/2	34x5	I
Autocar, 21UG	2 1/2	2400	4 1/2 x 5 1/2	34x4	34x5	D	Diamond, T, T	2	3285	4 x 5 1/2	36x4	36x7	W	Indep'd (Iowa), H	2 1/2	2940	3 1/2 x 5 1/2	34x4	34x6	I
Autocar, 26Y	3 1/2	4350	4 1/2 x 5 1/2	34x5	36x10	D	Diamond, T, V	3 1/2	4675	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Indep'd (Iowa), I	1	1665	3 1/2 x 5 1/2	34x3 1/2	34x4	I
Autocar, 26-B	3 1/2	4500	4 1/2 x 5 1/2	34x5	36x10	D	Diamond, T, W	5	5400	4 1/2 x 5 1/2	36x6	40x6 1/2	W	Indep'd (Ohio), F	1 1/2	2585	3 1/2 x 5	36x3 1/2	36x5	W
Available, H1 1/2	1 1/2	2750	4 x 5 1/2	36x3 1/2	36x5	W	Diamond, T, X	5	5650	4 1/2 x 6	36x6	40x6 1/2	W	Indep'd (Ohio), G	1 1/2	3285	4 1/2 x 5 1/2	36x4	36x4 1/2	W
Available, H2 1/2	2 1/2	3475	4 x 5 1/2	36x4	36x5 1/2	W	Diamond, T, Y	1 1/2	.....	3 1/2 x 5	34x4 1/2	34x5	I	Indep'd (Ohio), H	2 1/2	4285	4 1/2 x 5 1/2	36x5	36x5 1/2	W
Available, H3 1/2	3 1/2	4475	4 1/2 x 5 1/2	36x5	40x5 1/2	W	Diamond, T, Z	1 1/2	.....	3 1/2 x 5	36x6	38x8	I	Indep'd (Ohio), I	1 1/2	2290	3 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, H5	5	5375	4 1/2 x 6	36x6	40x12	W	Dual, A	1	1350	.....	.....	.....	.....	Indiana, 12	1 1/2	2290	3 1/2 x 5 1/2	34x3 1/2	34x5	W
Available, H7	7	6000	5 x 6	36x6	40x14	B	Dual, B	1 1/2	.....	3 1/2 x 5	34x4 1/2	34x5	I	Indiana, 20	2	2950	4 1/2 x 5 1/2	36x4	36x7	W
Avery	1	.....	3 x 4	34x5 1/2	34x5 1/2	I	Dispatch, F	1	.....	4 1/2 x 5 1/2	36x5	36x5 1/2	C	Indiana, 25	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x5	W
Beck, A. Jr.	1	1800	3 1/2 x 5	34x3 1/2	34x4	I	Doane	2 1/2	.....	4 1/2 x 5 1/2	36x6	40x6 1/2	C	Indiana, 35	3 1/2	3750	4 1/2 x 5 1/2	36x5	36x5 1/2	W
B-c																				

Specifications of Current Motor Truck Models—Continued

NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive	NAME AND MODEL	Tons Capacity	Chassis Price	Bore and Stroke	TIRES		Final Drive
				Front	Rear						Front	Rear						Front	Rear	
L.M.C., 2-20	2 1/2	2340	4 1/2 x 5 1/2	36x4	36x4d	I	Piedmont, 4-30	1 1/2	1685	3 1/2 x 5	34x4 1/2	34x4 1/2	W	Super Truck, 70	2 1/2	4300	4 1/2 x 6	36x5	40x5d	W
Lion, 1	1 1/2	2350	3 1/2 x 5 1/2	35x3 1/2	35x5 1/2	W	Pierce-Arrow	2	3750	4 x 5 1/2	36x4	36x4d	W	Super Truck, 100	3 1/2	5300	4 1/2 x 6	36x5	40x12	W
Lone Star, 9	1 1/2	1545	3 1/2 x 5 1/2	32x3 1/2	32x4 1/2	W	Pierce-Arrow	3 1/2	4950	4 1/2 x 5 1/2	36x5	36x5d	W	Super Truck, 150	4 1/2	6100	5 x 6	36x6	40x7d	W
Loedinghaus, K	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	W	Pierce-Arrow	5	5700	4 1/2 x 5 1/2	36x5	40x6d	W	Texas, A35	1 1/2	1095	3 1/2 x 5	33x4	33x4	I
Loedinghaus, C	2 1/2	2100	3 1/2 x 5 1/2	35x3 1/2	35x5 1/2	W	Pioneer, 59	1 1/2	1650	3 1/2 x 4 1/2	32x4 1/2	32x4 1/2	W	Texas, TK39	1 1/2	15.0	3 1/2 x 5	33x6	33x7	W
Loedinghaus, W	1 1/2	2700	3 1/2 x 5 1/2	34x3 1/2	34x5	W	Pittsburgher, B	2 1/2	3300	4 1/2 x 5 1/2	36x5	36x7	W	Texas, TK	1 1/2	2095	3 1/2 x 5	33x6 1/2	33x7 1/2	W
Maccar, L	1 1/2	2925	4 1/2 x 5 1/2	36x4	36x6	W	Pony	1 1/2	400	3 1/2 x 4	28x3 1/2	28x3 1/2	C	Tiffin, F15	1 1/2	3350	4 1/2 x 5 1/2	36x4	36x3 1/2	W
Maccar, H	1 1/2	3650	4 1/2 x 5 1/2	36x4	36x4d	W	Power, F	1 1/2	.....	3 1/2 x 5 1/2	36x5	36x6	W	Tiffin, F25	2 1/2	4700	4 1/2 x 5 1/2	36x5	40x5d	W
Maccar, M-2	2 1/2	4500	4 1/2 x 6	36x5	36x5d	W	Power, C	3 1/2	.....	3 1/2 x 5 1/2	36x5	40x10	W	Tiffin, F35	3 1/2	5550	4 1/2 x 6	36x6	40x6d	W
Maccar, G	1 1/2	5500	4 1/2 x 6	36x5	40x6d	W	Premcar, B-14	1 1/2	2475	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Tiffin, F50	5	6050	4 1/2 x 6	36x6	40x12	W
MacDonald, A	15	5750	4 1/2 x 6	40x7	40x14	I	Rainier, R-11	1 1/2	2150	3 1/2 x 5	35x5 1/2	35x5 1/2	W	Titan, HT	6	4500	4 1/2 x 6	36x6	40x6d	I
Mack, AB D.R.	1 1/2	3450	4 x 5	36x4	36x3 1/2	W	Rainier, R-15	3 1/2	4500	4 1/2 x 5 1/2	36x5	36x5d	W	Titan, HD	6	5400	4 1/2 x 6	36x6	40x6d	I
Mack, AB Chain	1 1/2	3000	4 x 5	36x4	36x3 1/2	W	Rainier, R-19	1 1/2	2350	3 1/2 x 5	34x3 1/2	34x5	W	Titan, TS	2 1/2	3100	4 1/2 x 5 1/2	36x4	36x4 1/2	W
Mack, AB Chain	2	3700	4 x 5	36x4	36x4d	C	Rainier, R-16	1 1/2	2600	3 1/2 x 5	34x3 1/2	34x5	W	Tower, J	1 1/2	3000	4 1/2 x 5 1/2	36x4	36x7	W
Mack, AB D.R.	2	3750	4 x 5	36x4	36x4d	W	Rainier, R-13	2	2950	4 1/2 x 5 1/2	34x4	34x6	W	Tower, H	3 1/2	4100	4 1/2 x 5 1/2	36x4	36x7 1/2	W
Mack, AC Chain	3 1/2	4950	5 x 6	36x5	40x5d	C	Rainier, R20	2 1/2	3650	4 1/2 x 5 1/2	34x4	34x7	W	Tower, G	3 1/2	3475	4 1/2 x 5 1/2	36x4	36x5 1/2	I
Mack, AC Chain	6	5100	5 x 6	36x6	40x6d	C	Rainier, R17	5	5250	4 1/2 x 5 1/2	36x6	36x6d	W	Traffic, C	1	1595	3 1/2 x 5	34x3 1/2	34x5	I
Mack, AC Chain	6 1/2	5750	5 x 6	36x6	40x7d	C	Ranger, 2TK-20	2	.....	3 1/2 x 5	36x6 1/2	36x6 1/2	W	Transport, 20	1	1550	3 1/2 x 5	34x3 1/2	34x4	I
Mack, AC Chain	7 1/2	6000	5 x 6	36x6	40x7d	W	Rea, F	2 1/2	1335	4 1/2 x 4 1/2	34x4 1/2	34x4 1/2	B	Transport, 30	1 1/2	2350	3 1/2 x 5 1/2	36x5 1/2	36x5	I
Mack Trac, AB	5	3100	4 x 5	36x4	36x4d	C	Reliance, 10A	1 1/2	2500	4 x 5 1/2	36x3 1/2	36x5	I	Transport, 50	2 1/2	2755	4 1/2 x 5 1/2	36x5 1/2	36x5	I
Mack Trac, AC	7	4950	5 x 6	36x5	40x5d	C	Reliance, 20B	2 1/2	3200	4 1/2 x 5 1/2	36x4	36x4d	I	Transport, 70	3 1/2	4105	4 1/2 x 5 1/2	36x5	36x10	I
Mack Trac, AC	10	5500	5 x 6	36x6	40x6d	C	Republic, 10	1	1695	3 1/2 x 5	35x5 1/2	35x5 1/2	I	Traylor, B	1 1/2	2500	3 1/2 x 5 1/2	36x4 1/2	36x5	W
Mack Trac, AC	13	5750	5 x 6	36x6	40x12	C	Republic, 10Exp-H	1 1/2	2095	3 1/2 x 5	35x5 1/2	35x5 1/2	I	Traylor, C	2	3000	4 x 5 1/2	36x4	36x7	W
Mack Trac, AC	15	6000	5 x 6	36x7	40x7d	C	Republic, 11X	1 1/2	2295	3 1/2 x 5	34x3 1/2	34x5	I	Traylor, D	3	3500	4 1/2 x 5 1/2	36x4	36x8	W
Mapleleaf, AA**	2	4150	4 x 5 1/2	36x4	36x6	W	Republic, 19	2 1/2	2795	4 1/2 x 5 1/2	36x4	36x7	I	Traylor, E	4	4700	4 1/2 x 5 1/2	36x5	40x10	W
Mapleleaf, BB**	2	4885	4 1/2 x 5 1/2	36x4	36x4d	W	Republic, 20	3 1/2	3895	4 1/2 x 5 1/2	36x5	36x10	I	Traylor, F	5	5100	4 1/2 x 6	36x6	40x6 1/2	I
Mapleleaf, CC**	4	5770	4 1/2 x 5 1/2	36x5	36x5 1/2	W	Riker, B	3	.....	4 1/2 x 6	36x5	36x5d	W	Triangle, AA	1	1600	3 1/2 x 5	35x5 1/2	35x5 1/2	I
Mapleleaf, DD**	5	7025	4 1/2 x 5 1/2	36x6	40x6 1/2	W	Riker, BB	4	.....	4 1/2 x 6	36x5	36x6d	W	Triangle, A	1 1/2	2350	3 1/2 x 5 1/2	34x3 1/2	34x6	I
Master, JW	1 1/2	2690	4 1/2 x 5 1/2	34x3 1/2	34x5	W	Rowe, CW	1 1/2	3000	3 1/2 x 5	36x5 1/2	36x6 1/2	W	Triangle, C	2	2700	3 1/2 x 5 1/2	36x4	36x6	I
Master, W	2 1/2	3200	4 1/2 x 5 1/2	34x3 1/2	34x7	W	Rowe, HW	4	4300	4 1/2 x 6	36x5	36x6d	W	Triangle, B	2 1/2	2050	4 x 5 1/2	36x4	36x7	I
Master, D	2 1/2	3510	4 1/2 x 5 1/2	34x4	36x7	D	Rowe, C. D. W.	2	3300	4 x 5	34x4	36x3 1/2	W	Triumph, HB	2	2900	3 1/2 x 5 1/2	36x4	36x7	W
Master, A	3 1/2	4100	4 1/2 x 6	36x5	40x5d	D	Rowe, G. S. W.	3	4150	4 x 6	34x5	36x5d	W	Triumph, HC	1 1/2	2530	3 1/2 x 5 1/2	36x3 1/2	36x5	W
Master, E	3 1/2	4610	4 1/2 x 6	36x5	40x5d	D	Rowe, G. P. W.	3	5250	3 1/2 x 5 1/2	36x7 1/2	42x9 1/2	W	Triumph, G	1	1995	3 1/2 x 5 1/2	34x5 1/2	34x5 1/2	W
Master, B	5	5290	4 1/2 x 6 1/2	36x6	40x6d	D	Rumely, A	1 1/2	2720	3 1/2 x 5 1/2	36x3 1/2	36x5	W	Twin City, B.W.	2	3000	4 x 5 1/2	36x4	36x7	I
Master, F	5	5440	4 1/2 x 6 1/2	36x5	40x6d	D	Samson, 15	1 1/2	.....	3 1/2 x 5	34x4	32x4	B	Twin City, A.W.	3 1/2	4400	4 1/2 x 6	36x5	40x5 1/2	W
Master Trac, T	6	3740	4 1/2 x 5 1/2	34x3 1/2	34x5	I	Samson, 25	1 1/2	.....	3 1/2 x 5	35x5	35x5	B	Twin City, FWDB	3 1/2	4730	5 1/2 x 6	36x6	36x6	I
Maxwell, 1 1/2	1 1/2	1332	3 1/2 x 4 1/2	28x3	32x4	W	Sandow, G	1 1/2	2295	3 1/2 x 5	34x3 1/2	34x5	W	Twin City, FWDA	5	5270	5 1/2 x 6	36x7	36x7	I
Memomine, HT	1 1/2	2030	3 1/2 x 5	34x3 1/2	36x5	W	Sandow, CG	1 1/2	2700	3 1/2 x 5	34x4	34x6	W	Ultimate, A	2	3200	4 x 5 1/2	36x3 1/2	36x5	W
Memomine, H	1 1/2	2725	4 x 5	36x3 1/2	36x5	W	Sandow, J	2 1/2	3375	4 1/2 x 5 1/2	36x4	36x7	W	Ultimate, AJ	2	3250	4 1/2 x 5 1/2	36x5 1/2	36x7 1/2	W
Memomine, D	2	3245	4 x 6	36x4	36x4d	W	Sandow, M	3 1/2	4295	4 1/2 x 5 1/2	36x5	36x5d	W	Ultimate, B	3	3750	4 1/2 x 5 1/2	36x4	36x4d	W
Memomine, G	3 1/2	4270	4 1/2 x 6	36x5	36x5d	W	Sandow, L	5	4975	4 1/2 x 5 1/2	36x6	40x6d	W	Ultimate, BL	3	3850	.....	.....	.....	.....
Memomine, J3	5	5450	4 1/2 x 6	36x6	40x6d	W	Sanford, 25	2 1/2	3350	4 1/2 x 5 1/2	36x4	36x4d	W	Union, F W	2 1/2	3490	4 x 6	36x5	36x8	D
Moline, 10	1 1/2	2450	3 1/2 x 5	34x5 1/2	36x6 1/2	I	Sanford, 35	3 1/2	4200	4 1/2 x 5 1/2	36x5	36x5d	W	Union, H W	4	4485	4 1/2 x 6	36x6	40x12	D
Moreland, 20N	1 1/2	3125	4 1/2 x 5 1/2	36x3 1/2	36x6	W	Sanford, 50	5	5100	4 1/2 x 6	36x5	40x6d	W	Union, J W	6	5800	5 x 6	36x6	40x14	D
Moreland, 20B	1 1/2	3900	4 1/2 x 5 1/2	36x4	36x8	W	Schacht, 2-Ton	2 1/2	3550	4 1/2 x 6	36x4	36x7	W	United, A	1 1/2	2445	3 1/2 x 5 1/2	36x3 1/2	34x5	I
Moreland, 20C	2 1/2	4975	4 1/2 x 6	36x5	40x5d	W	Schacht, 2 1/2-Ton	2 1/2	3850	4 1/2 x 6	36x4	36x4d	W	United, B	2 1/2	3150	4 1/2 x 5 1/2	36x4	36x7	I
Moreland, 20G	3 1/2	5350	4 1/2 x 6	36x6	40x6d	W	Schacht, 3 1/2-Ton	3 1/2	4350	4 1/2 x 6	36x5	36x5d								

